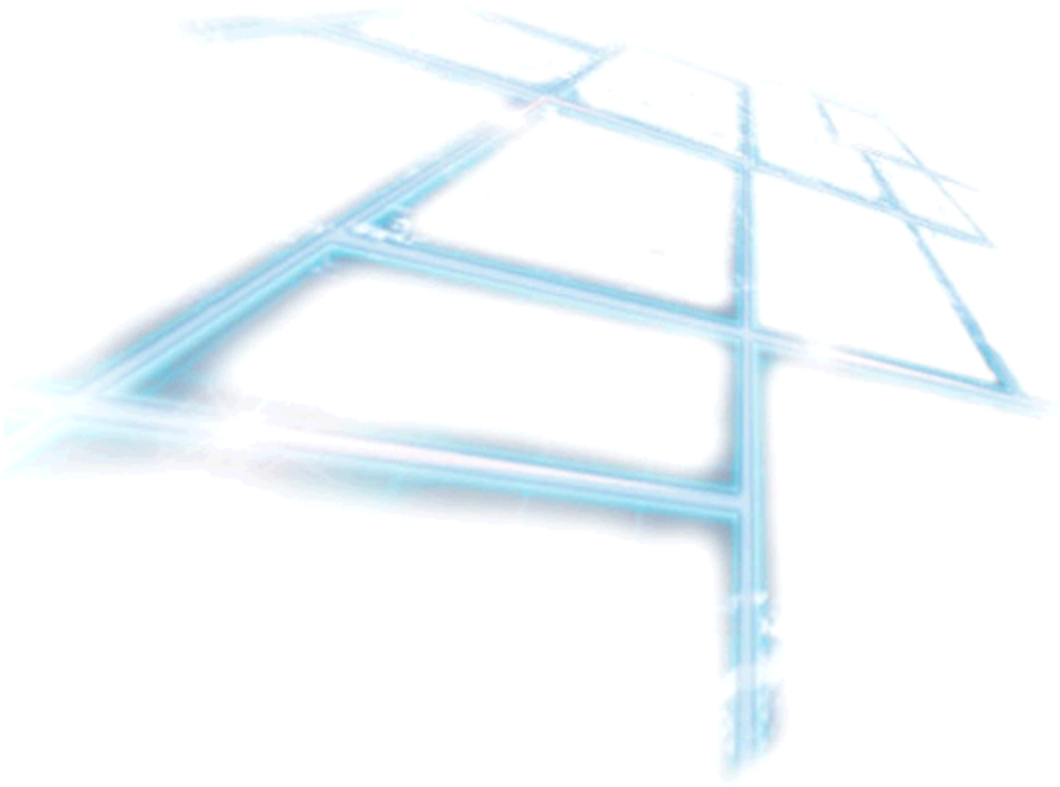
QUANCOM
INFORMATIONSSYSTEME

PCIWDOG3/4



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1. Overview

1.1 Introduction

Congratulations! You've bought a QUANCOM high quality measurement and automation board, which shows the newest update of technology and whose attributes and functions are able to compete with every other instrument and even beats them. The following special attributes are included:

Features of the board

- Easy programming
- Various sample applications in different programming languages
- Driver support by Windows XP, 2000, NT and Me/98/95 with the QLIB (QUANCOM Driver Library)

1.2 Our experience is your profit

We from QUANCOM are specialists for the development of hard- and software. QUANCOM has grown to become one of the leading suppliers of measuring and automation technology to industry. At its design centres QUANCOM has developed an impressive range of products.

1.3 Customer Communication

QUANCOM wants to receive your comments on our products and manuals. We are interested in the applications you develop with our products, and we want to help if you have problems with them. To make it easy for you to contact us, this manual contains comment and configuration forms for you to complete. These forms are in chapter "**Customer Communication and Help**" at the end of this manual.

1.4 Changes in this manual and software updates

QUANCOM - products are marked out by their constant further development. You can watch all the actual information of the changes in the README-file on the installation disk or CD. You can always get more information and free software updates on our internet website **www.quancom.de**

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1.5 Extend of Delivery

- PCIWDOG3/4 Card (plate)
- QUANCOM CD
- RESET cable with 2 pole.
- Cable Power on cable with 2 pole.

Lustre terminal On that CD is, the following software:

- QLIB (QUANCOM® software library for the measuring technique)
- PCIWDOG3 Configuration Wizard for the PCIWDOG3/4
- Flasher for later updates of the firmware of the PCIWDOG3/4
- example of programs of the PCIWDOG3/4
- User manual

If a component is missing please contact your dealer. QUANCOM reserves the right to change the extent of delivery without a preliminary announcement.

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1.6 Accessories ATX / BTX adapter cable

Optionally to QUANCOM Watchdogcard an ATX adaptor cable is available. This cable is attached between Motherboard and the ATX power Connector by the power pack. To the WDOG-ATX-Kab2 you can attach the PCIWDOG3/4 in few steps. Thereby it is avoided that you must attach the RESET cable to Watchdogcard (there are some computers, which possess at all no RESET tracer. Here releasing a RESET can with the help of this cable happened).

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2. Installation procedures

2.1 System requirements

- Personal computer: The QUANCOM boards are assigned to operate in IBM-AT compatible computers with 80X86 or compatible. (i.e. 80386 / 80486 / Pentium)
- Bus: Your computer must have the corresponding bus. (PCI / ISA)

You can find more information in chapter Leitfaden zur Schnellkonfiguration Hard- und Software.

2.2 Safety precautions

For the sake of your security and of a safe function of your new QUANCOM board mind the following advice:

- Before opening the computer please unplug it.
- Computer motherboards and components contain very delicate integrated circuit (IC) chips. To protect them against damage from static electricity, you must follow some precautions whenever you work on your computer. Use a grounded wrist strap before handling computer components. If you don't have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case.
- Hold components by the edges and try not to touch the integrated circuit chips, leads or circuitry.
- Place components on a grounded anti-static pad or on the bag that came with the component whenever the components are separated from the system.

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Modifications, made at the device without express permission of QUANCOM, lead to the loss

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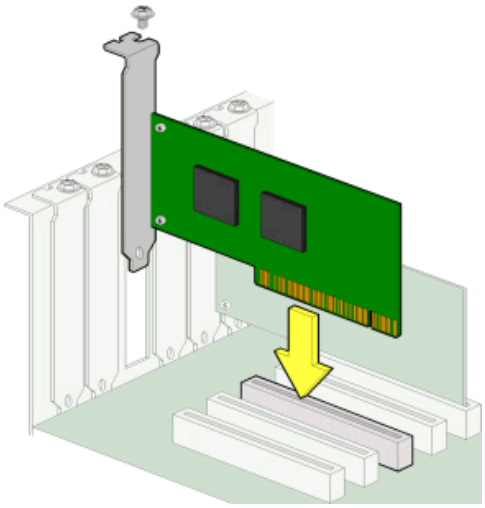
2.3 Installing the board

Always turn the system power off and remove the power cord from the wall before installing or removing any device.
Always pay regard to static electricity precautions.
See “**Safety precautions**”

1. Switch off the computer and the connected devices and unplug them. Static electricity can destroy your computer and the board!
Discharge yourself as described in chapter ”**Safety precautions**”.



2. To open your PC you have to detach the four safety screws on the back of the case with a screw driver. Then you can pull the cover forwards. If necessary you must remove impeding cables.

3. The slots are positioned at the rear side of your computer. Unused slots are covered by a small metal plate. Search for a free slot, detach its holding screw and remove the small metal plate belonging to it.

4. Position the extension card into a free slot Pay attention that the card is set firmly in the slot.

5. Fasten the board with the screw of the small metal plate on the back wall.

6. Close the cover of your computer. Cables, that you detached during the installation, should now be reconnected.

7. Connect the cable of the board into the slot belonging to it.

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3. Manual to the high-speed configuration hard and software

3.1 Watchdogkarte attach and insert

- Card insert
- GSM modem (optionally as accessories available) attach
- reset cables attach
- ATX-WDOG-Kab2 attach
- Power on cable attach
- Opto couplers attach
- Temperature sensor (optionally as accessories available) attach

3.2 Software install

The Watchdogsogftware automatically mt the QLIB installed.

3.3 Watchdogcard configure

Watchdogcard over the PCIWDOG3 Configuration Wizard configure. (for this there is a prefabricated configuration file with a standard configuration)

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4. Technical Hardware Description

4.1 General Informations

The watchdog board is used for the functional monitoring of a personal computer. If the PC or a software running on the PC does not react any longer (i.e. crashes), the watchdog card switches the relay(s) on. The first relay generates a hardware reset of the personal computer. The PWDOG2N and WATCHDOG2 are additionally able to switch an external device (i.e. modem, router, etc.) with the secondary relay off and on.

4.2 Functionality

The watchdog board supervises the personal computer. The watchdog card constantly tests the function of a program running on the PC. If the personal computer and therefore the program crashes, the watchdog resets the computer. The software running on the personal computer must execute a function call to the sofware library in a determined interval. The minimum access time is adjustable on the board by the DIP switch. The user can choose the following intervals: 30 ms, 0.5 s, 4 s, 16 s, 1min, 4 min, 8 min or 12 min. The PWDOG2N allows an adjustable timeout interval up to 14,3h. If the time between two accesses is longer than the specified timeout interval, the board switches the relay on and short circuits the reset switch on the motherboard. To be exact the relay short circuits the left two connectors of the Jumper 1 (JP1) and parallel to it the connectors of the Jumper 2 (JP2). The relay hold time can be set by the DIP switch for 0,5, 2 or 8 sec.

4.3 Control elements and LED‘s

Act LED

The act LED flashes, as soon as the driver of the PCIWDOG3/4 was loaded (APPDOG). It shines then durably, as soon as the PCIWDOG3/4 map is addressed by software (over the instructions QAPIWatchdogRetrigger) or if the APPDOG software takes over this. As soon as the PCIWDOG3/4 is deactivated by software, this LED expires

TOut LED (Timeout LED)

The TOut LED shines as soon as the Timeoutzeit was exceeded. The Timeoutzeit and the actions which can be implemented then are stopped with the PCIWDOG3 Configuration

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Wizard Stat LED This LED flashes, if the Watchdogcard becomes addressed by the software (retriggert). If it goes out, then the PC accesses no longer (QAPIWatchdogRetrigger) the Watchdog-card.

CPU LED

The CPU LED signals the activity of the CPU on the Watchdog-card.

External LED´s

Over the 25 pole. Plugs are outward led the 3 light emitting diodes act LED, Tout LED and Stat LED, so that they can attach there also external LED´s.

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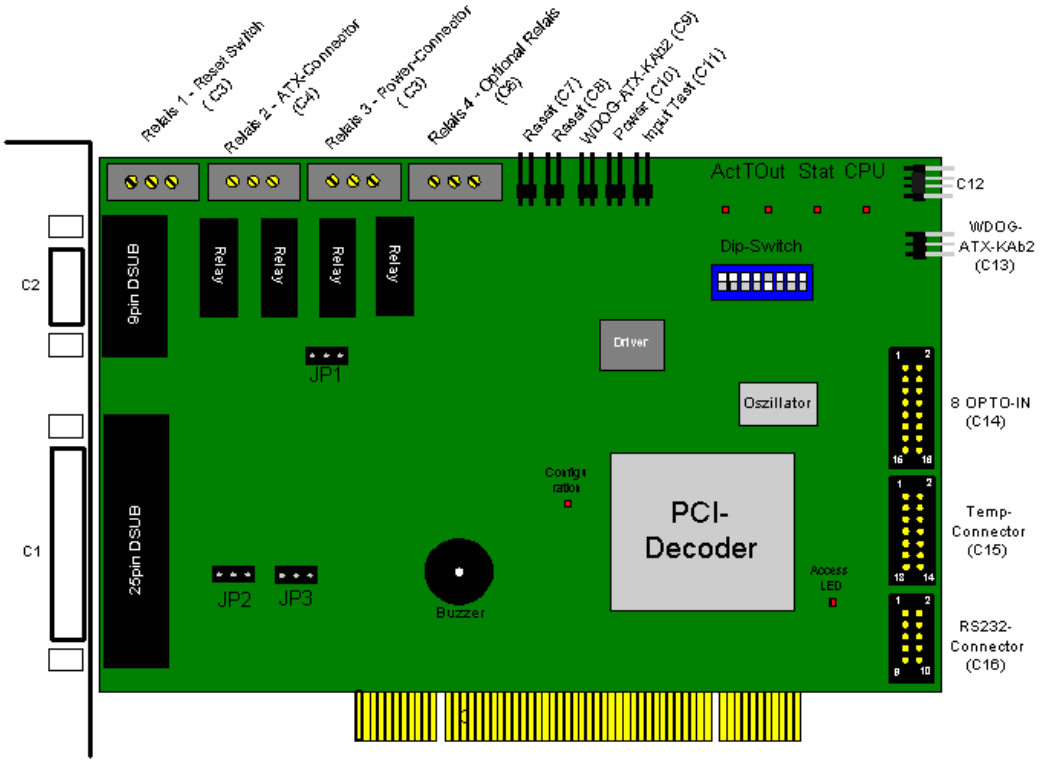
4.4 Card overveiw



C1:	Connection types for opto couplers, external light emitting diodes, relay contacts and a A/D channel
C2:	RS-232 interface for the connection of a GSM modem
C3, C7, C8	Relay 1 (interconnecting to the reset tracer)
C4, C9	relay 2 (resets over ATX Connector)
C5, C10	relay 3 (connection to power the tracer)
C6	relay 4 (optionally, no special use intended)
C11	optional connection for a tracer (function in the Wizard one configures)
C12	is not supported yet
C13	current supply of the ATX cable (over WDOG-ATX-Kab2)
C14	connection of the Opto entrances 1-8
C15	connection of 4 temperature sensors (with optional external sensors)
C16	second serial interface for PC-DEBUG of purposes or power down signal of a USV
JP1	configuration of the current supply for the GSM modem
JP2 - JP3	configuration of the input voltage
Buzzer	hums with certain event (configuration over configuration assistants

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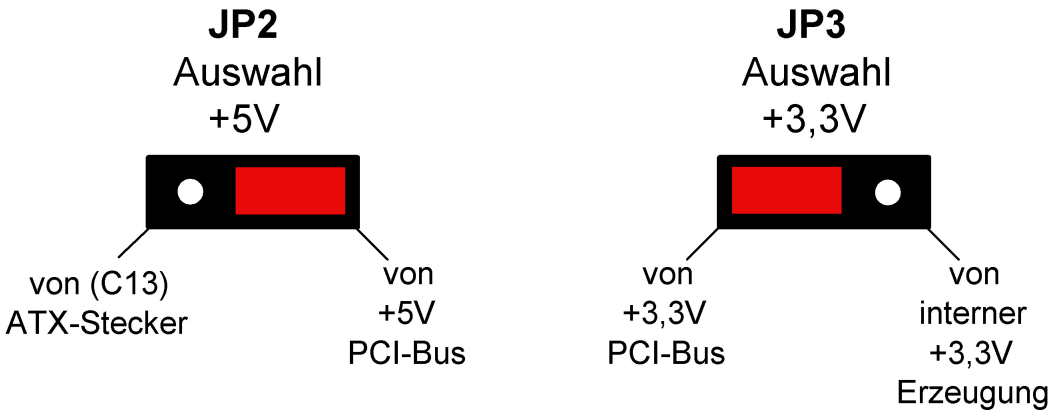
4.5 Selection 5V/3,3V Motherboard



Example Jumpereinstellungen with 5V enterprise

Example Jumpereinstellungen with 3,3V enterprise

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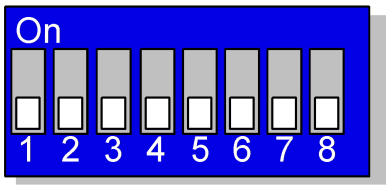
4.6 Configuration of the DIP-switch

With the DIP-switch can you disable certain functions of the PCIWDOG3/4 (even if they are in PCIWDOG3 Configuration Wizard set).



All switch OFF = Extradition state

1 ON=Turn off the temperature query

2 ON=Turn off the Optocoupler query

3 ON=Turn off the Timer query (only PCIWDOG 4)

4 ON=Turn off the sms-reception/shiping

5 ON=is not used

The following configuration should be turn every time off

(they serve for tests and diagnosis bevor delivery).

6 ON=Activation of the issue of the Logs to the serial interface
(only used for DEBUG)

7,8 Must be all time off. This switch is for Diagnostic purposes.

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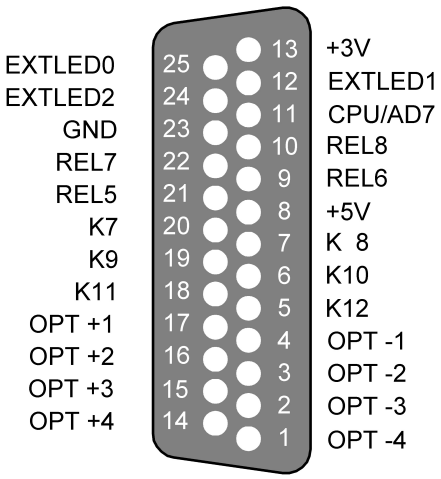
4.7 Plug connector and connections on the card

4.7.1 The 25-pol. D-SUB socket (c1)



On that 25-pin plug connector are the connections for 4 further opto couplers and for 4 further relays, which are on the map.

EXTLED0	Additional port the act LED
EXTLED1	Additional port the **TOut LED (Timeout LED)**
EXTLED2	Additional connection that **Stat-LED**
	The EXTLED0..2 of signals may be loaded only with 8mA. They are meant for the connection of an external light emitting diode, which must be attached over 330 OHMS a resistance against +3V.
+3V:	3,3 Volt voltage supply
CPU/AD7	A/D (similar/digital) transducer entrance (Voltage range: 0..3V to the Bezuspunkt GND)
GND:	Mass
REL5...8:	Relays 5-8
	Relay 5 lies parallel to the Buzzer present at the map. All relay exits may be loaded with 20 mA. External relays can be attached with the relay coil on the REL5..8 exit and +5V.
+5V:	5V voltage supply
K7,8,9	Contacts of relay 3 (used for power on/off). Opener is K7, common contact is K8, normally open contact is K9.

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K10,11,12	Contacts of relay 4 (relays opt on the map). Opener is K10, common contact is K11, normally open contact is K12.
OPT+1, OPT-1	Opto coupler input 1
OPT+2, OPT-2	Opto coupler input 2
OPT+3,PT-3	Opto coupler input 3
OPT+4, OPT-4	Opto coupler input 4

The opto couplers of entrances (8 pieces on the map, 4 become over the 25 pole. D-SUB socket led out) are digital entrances, which are separate to the PC galvanically among themselves and. The entrances for a tension of 12-24 V are factory-installed configure. By exchange of the resistance network (> page 32) also another input voltage section can be ewählt.

4.7.2 Connection of the GSM modem (C2)

To the interface C2 an optional GSM modem is attached.

With the help of these additives it is possible the PCIWDOG3/4 to evaluate received SMS and to dispatch on pre-programmed events a SMS.

Operating voltage Comes from the port C13 (this is possible only when using the optionally available WDOG-ATX-Kab2. Thereby SMS sending/receiving is possible also with switched off computer.

Operating voltage for the GSM modem comes from the PCI plug connector.

If JP1 is put, over the 9 poligen D-SUB plug connector also the operating voltage (5 V) is led to the modem. Note please that for this a special cable is necessary. Here no commercial 9 of poliges 1:1 cable may be used.

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4.7.3 Connection allocation of the relays 1-4 (C3, C4, C5, C6)

Relay 1: Port C3 and also C7 and C8 This relay is used for the connection of the RESET tracer. If this is missing, alternatively the RESET function at the ATX Netztteil over relay 2 can be used. If this is not used for the connection of the RESET tracer, it can be used e.g. for the connection of a separate horn.

Relay 2: Port C4 and also C9 This relay is used for the connection of the RESET possibility over the ATX power pack. At port C9 directly the connection to the ATX power pack can be made over the cable.

Relay 3: Port C5 and also C10 This relay is used for the connection of the power Buttons. If this is attached, the PC out and also can be restarted.

Relay 4: Port C6 This relay serves for the optional connection one equipment which can be switched. Hereby e.g. briefly an external modem can, routs o.ä to be switched. Also the connection of a horn or a large signal light is possible. Note please that the maximum values of the relay (3 Watt, 0.2 A) are not exceeded.

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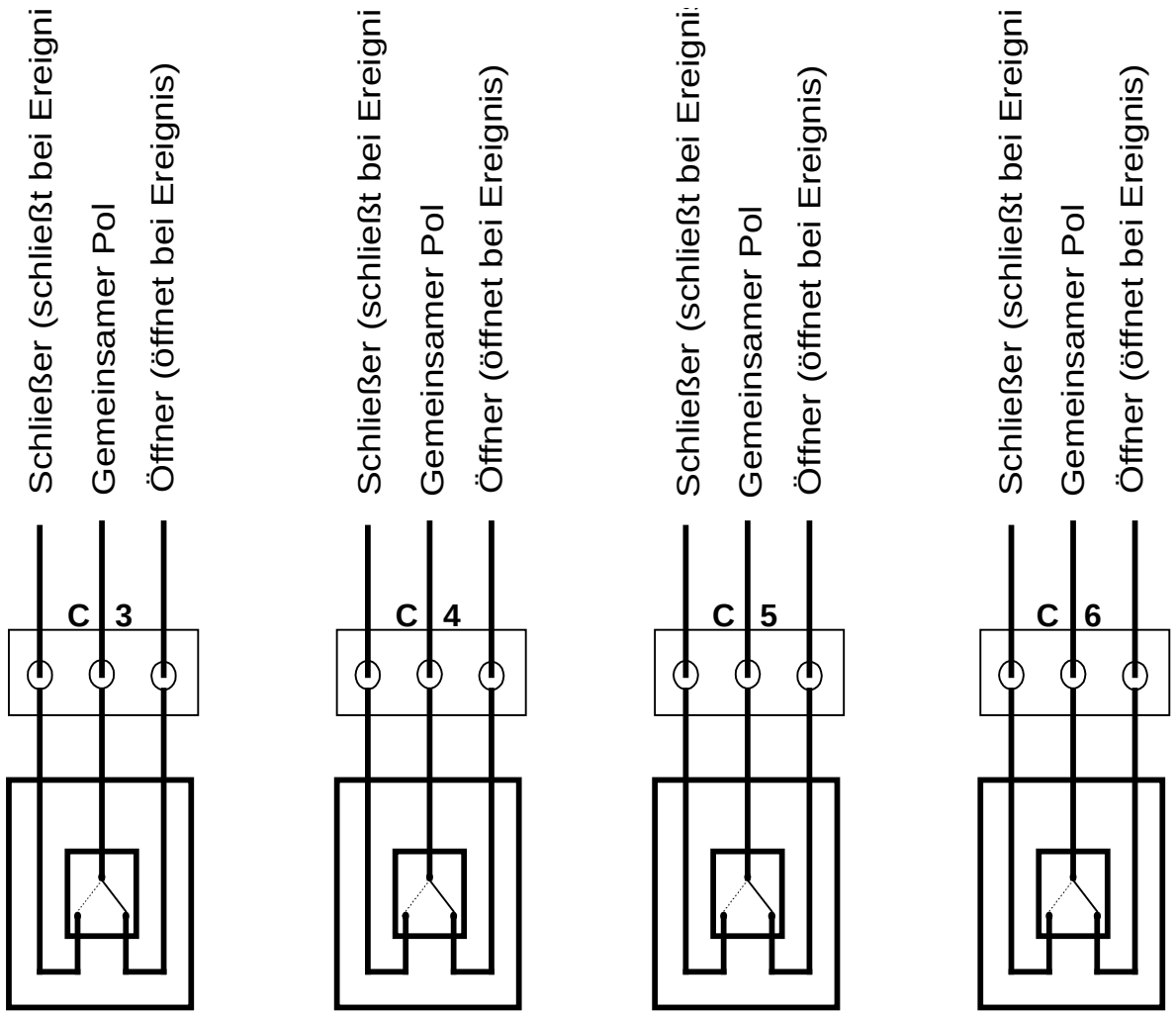

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4.7.4 Connection of the RESET cable (crimping plug C7 and C8)

Switch off the current supply and remove you the mains cable before you with the installation continue. Prevent expressly static electricity. Check for it under “safety instructions”.

This is an example, as a PCIWDOG3/4 can be attached to a Motherboard with RESET tracer.

In order to install the map, one must proceed as follows:

- Set the map into a free Slot

- intended for it Remove the plug of the RESET tracer from the Motherboard and put you it on the crimping plug C7 (on the map this is the left Rel RESET crimping plug) the PCIWDOD3/4.

- Put the provided RESET cable on the crimping plug C8 (on the map this is the right Rel RESET crimping plug) the PCIWDOG3/4 and the other end of the cable on the plug for the RESET tracer on the Motherboard (here in the previous point the cable one took off).

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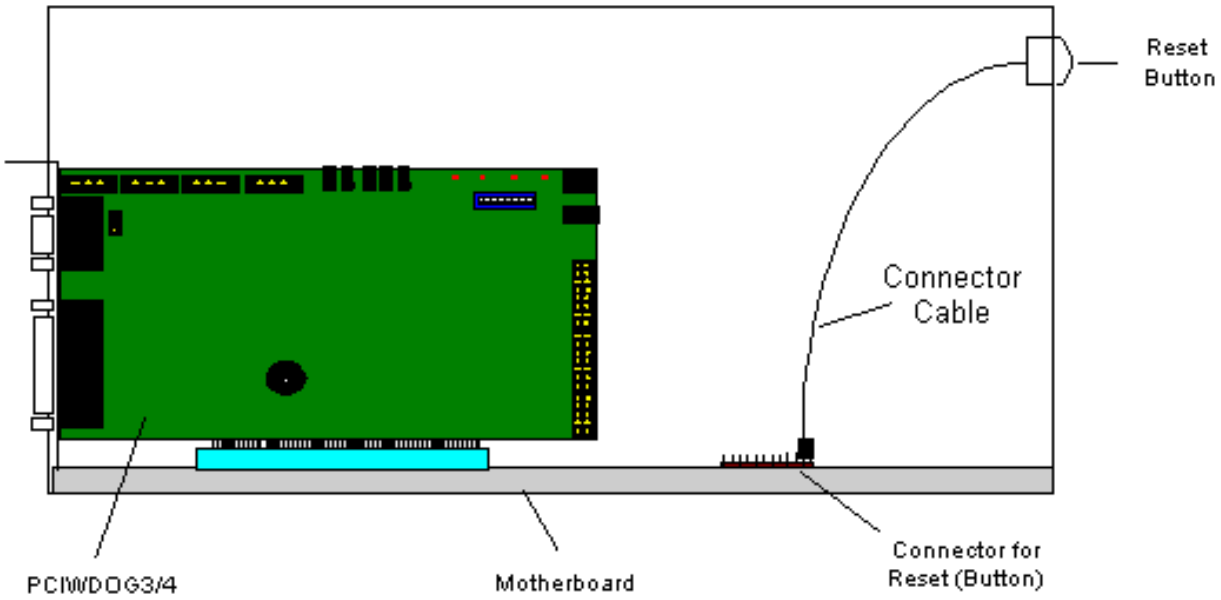
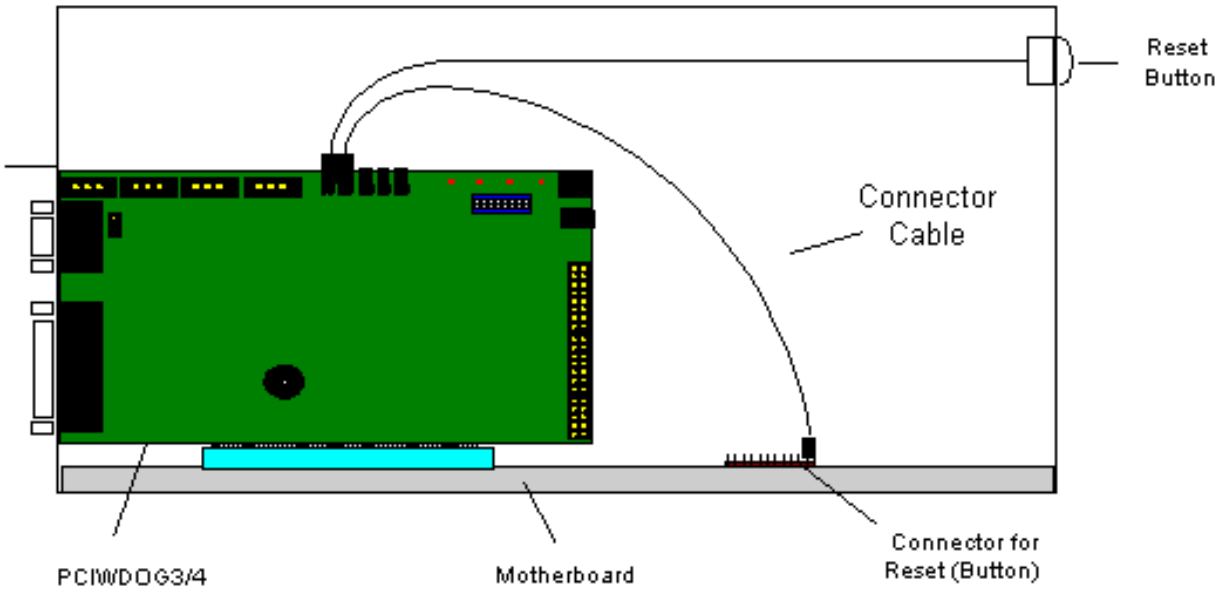
Connection example:

Before the connection of the cable to the PCIWDOG3/4



After the connection of the cable to the PCIWDOG3/4



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4.7.5 Connection of the ATX Resetkabels at crimping plug C9 and C13

Switch off the current supply and remove you the mains cable before you with the installation continue. Prevent expressly static electricity. Check for it under" safety instructions".

This is an example, as a PCIWDOG3/4 can be attached to a Motherboard without RESET tracers. For this the optional WDOG-ATX-Kab2 becomes (INDWDOGATXKAB2) Cable needs.

In order to install the map, one must proceed as follows:

- Set the map into a free Slot
- intended for it The ATX power pack is with the Motherboard by 20 a pole.
- Plug connected. Remove this cable from the Motherboard and put you it into the socket of the WDOG-ATX-Kab2
- Put the plug of the WDOG-ATX-Kab2 into the socket on the Motherboard
- Close the 2 pole. Socket to the crimping plug C9 (on the map this is the REL ATXpson crimping plug) and the 3 pole. Socket to the crimping plug C13 (on the map this is the ATX-PWR crimping plug)

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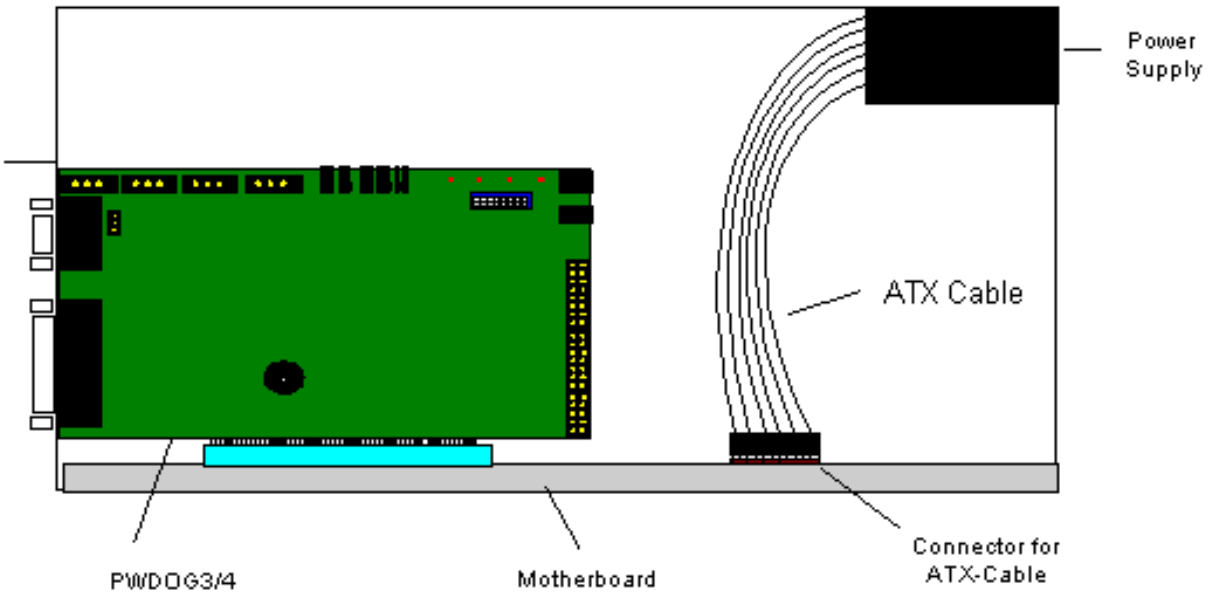
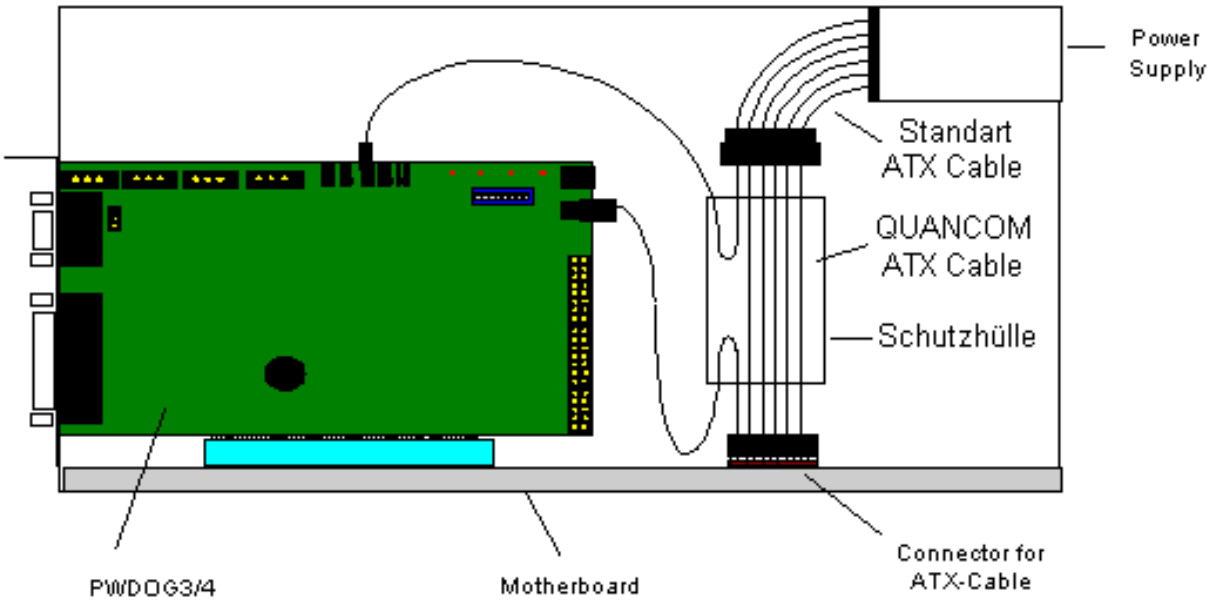
Connection example:

Before the connection of the cable to the PCIWDOG3/4



After the connection of the cable to the PCIWDOG3/4



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4.7.6 Connection for the power on function (crimping plug C10)

Switch off the current supply and remove you the mains cable before you with the installation continue. Prevent expressly static electricity. Check for it under" safety instructions".

This is an example, as a PCIWDOG3/4 is attached to a Motherboard, in order to use the power on function.

In order to install the card, one must proceed as follows:

- Set the map into a free Slot intended for it
- The power on switch is connected with the Motherboard.
- Isolate this cable in a place favorable for you and isolate you off all 4 cables.
- Attach the power on cable in such a way, as you can see on the following connection example.
- Connect the power on cable with the crimping plug C10 (on the map is this the REL POWER crimping plug)

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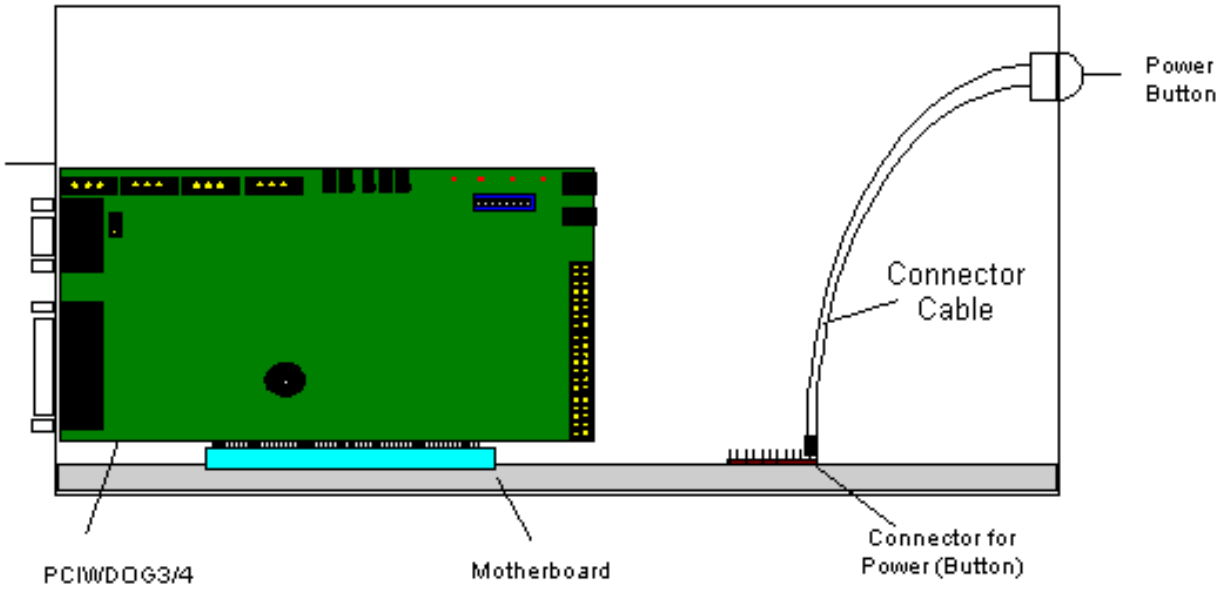
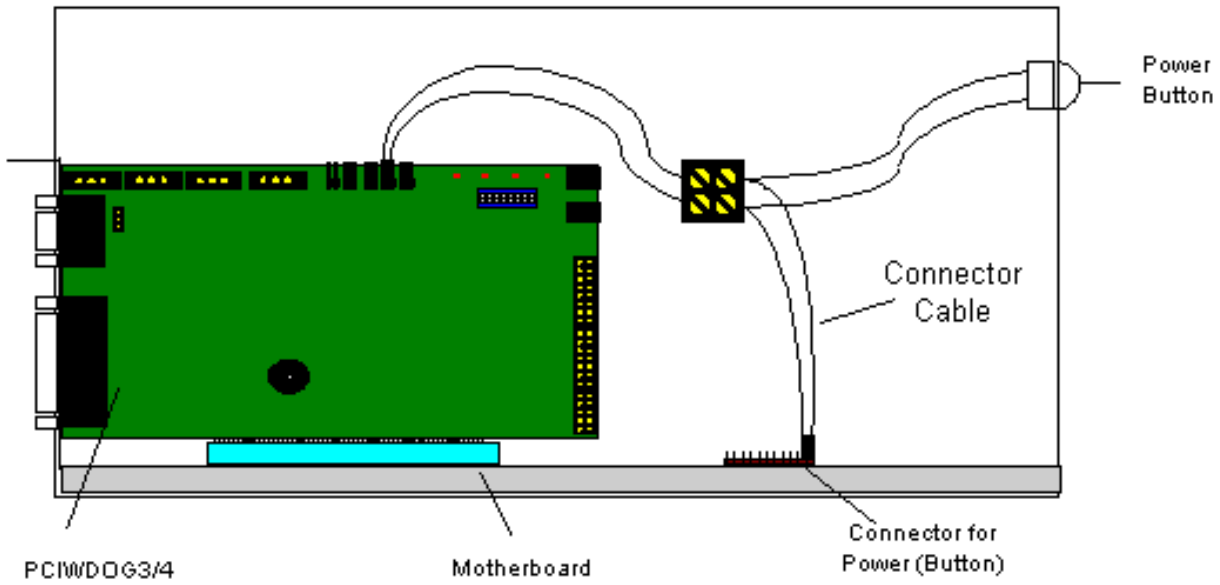
Connection example:

Before the connection of the cable to the PCIWDOG3/4



After the connection of the cable to the PCIWDOG3/4



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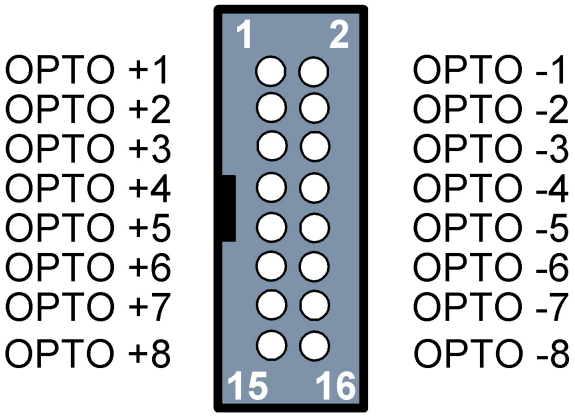
4.7.7 External connection for 8 opto couplers (port C14)



Over the plug connector C14 8 optically decoupled switching entrances are available. (OPTO 1-4 is also still available on the plug connector c1 led outward The actions which can be accomplished with the condition change of the entrances in the PCIWDOG3 Configuration Wizard are specified.

4.7.8 Selection pre-resistor opto coupler of inputs

By exchange of the resistance network you can stop the input voltage for the opto couplers. (Delivery status is 12-30V)

Input voltages	Resistance networks
5V-12V	470Ω
12V-30V	2,2kΩ

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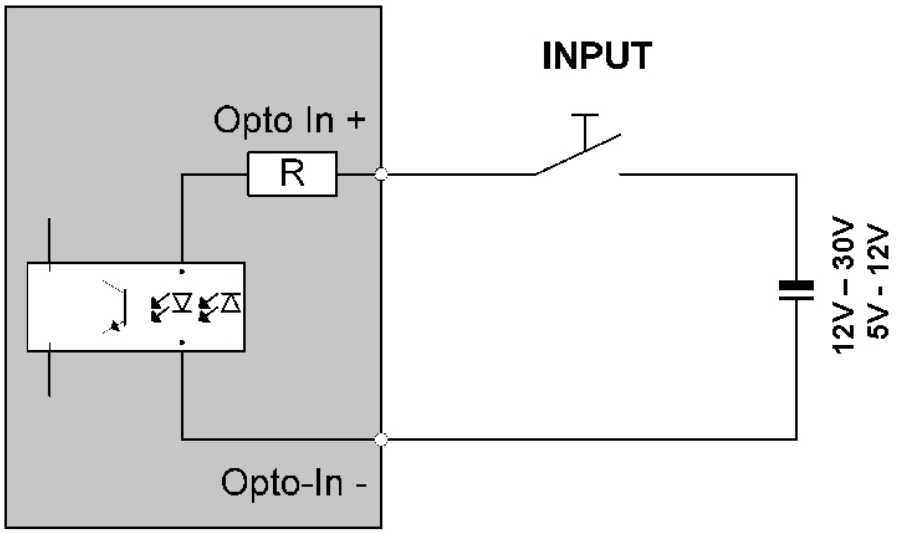
4.7.9 Connection example of the wiring of the opto couplers



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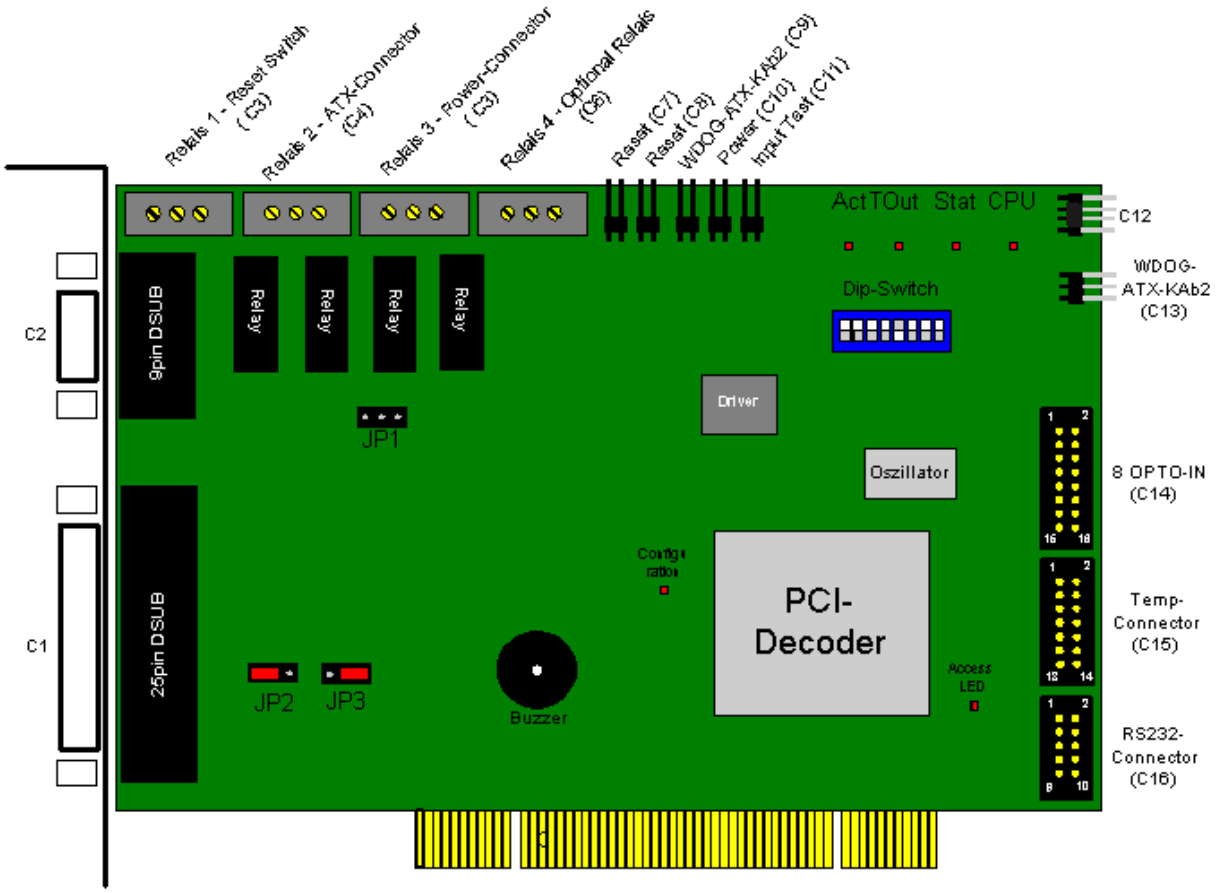
4.8 Attitude of the current supply of the PCIWDOG3/4

4.8.1 Voltage supply over port C13

Here the PCIWDOG3/4 and the GSM modem are gespeisst additionally over the WDOG-ATX-Kab2. That means that over the WDOG-ATX-Kab2 an additional voltage supply of 5 V takes place, which are active with switched off computer. This makes possible the PCIWDOG3/4 with switched off computer to activate this and/or send and receive a SMS.

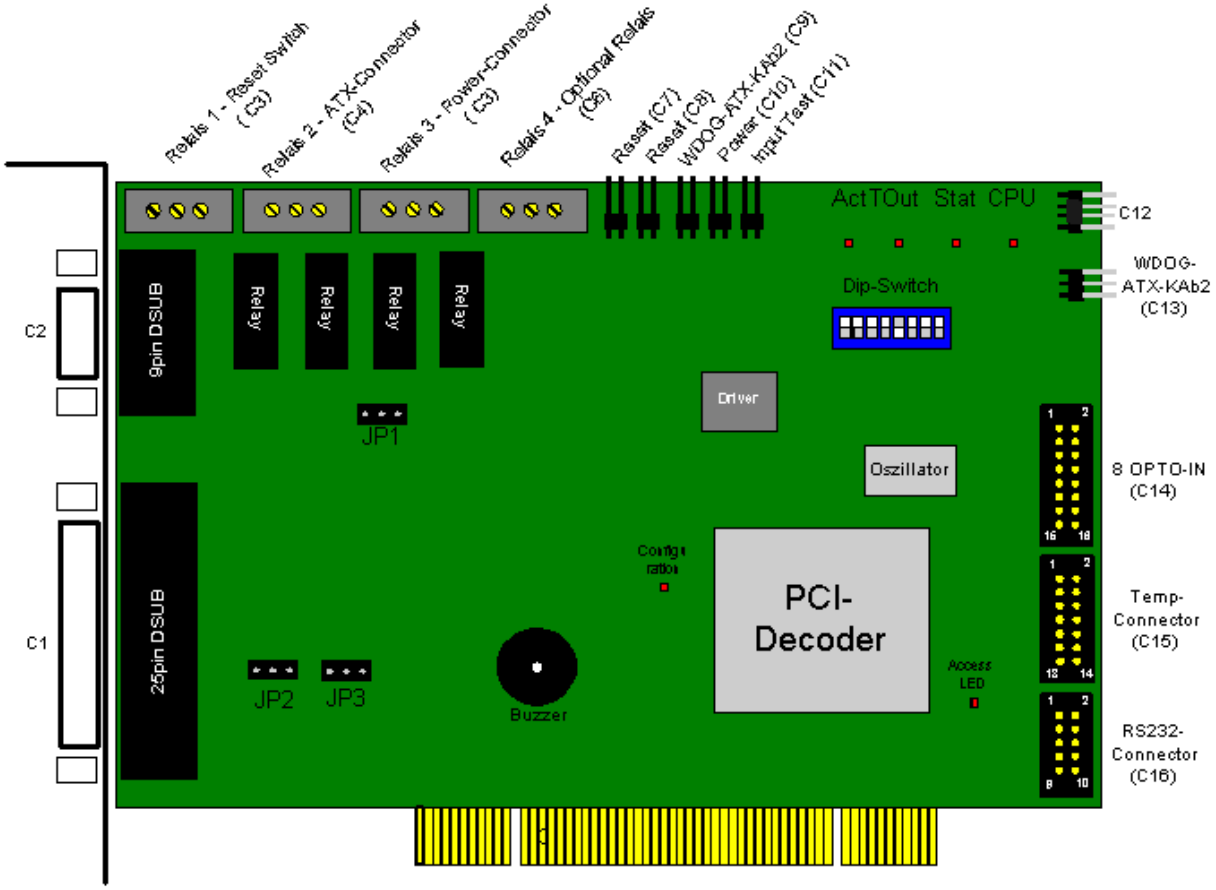


Pay attention:

- JP1 must left attached its
- JP2 must right attached its
- JP3 is right attached

4.8.1.1 Basic adjustment (no voltage supply over C13)

Here the PCIWDOG3/4 and the GSM modem are gespeisst over the 5V of the PCI Slots. .

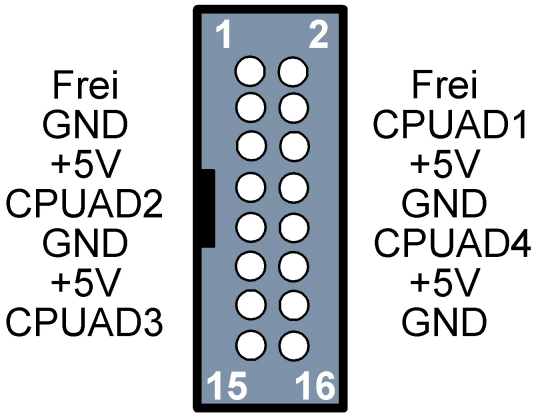


Pay attention:

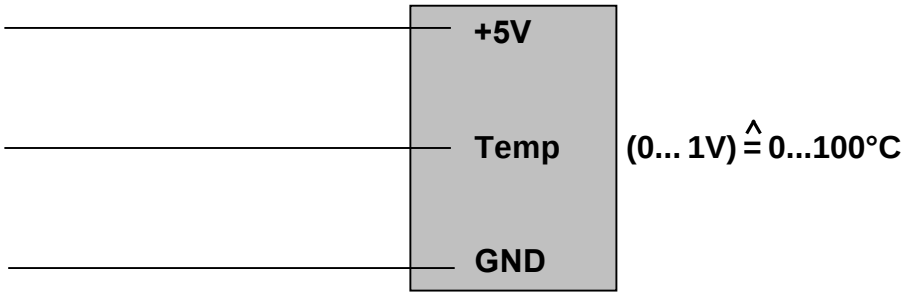
- JP1 must left attached its
- JP2 must right attached its
- JP3 is right attached

4.8.1.2 Connection for 4 temperature sensors (port C15)

Ready-made temperature sensors (0-100°C) find you under the QUANCOM article number INDWDOGTEMP4.



Is your Watchdogcard to inform by SMS or Mail (connection of an optional GSM modem), if the CCU exhaust precipitates? Or even the PC switch off, if the CCU temperature exceeds a critical parameter? Then can be attached here up to 4 temperature sensors, which serve for the monitoring. (Configuration by software)



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5. Configuration of the Watchdogkarte by software

The PCIWDOG3 Configuration Wizard offers the simple and fast configuration of the Watchdogcard to you. The configuration can take place also with not inserted Watchdog-card. For this there is the possibility a configuration already provided to store and to work on these again at a later time.

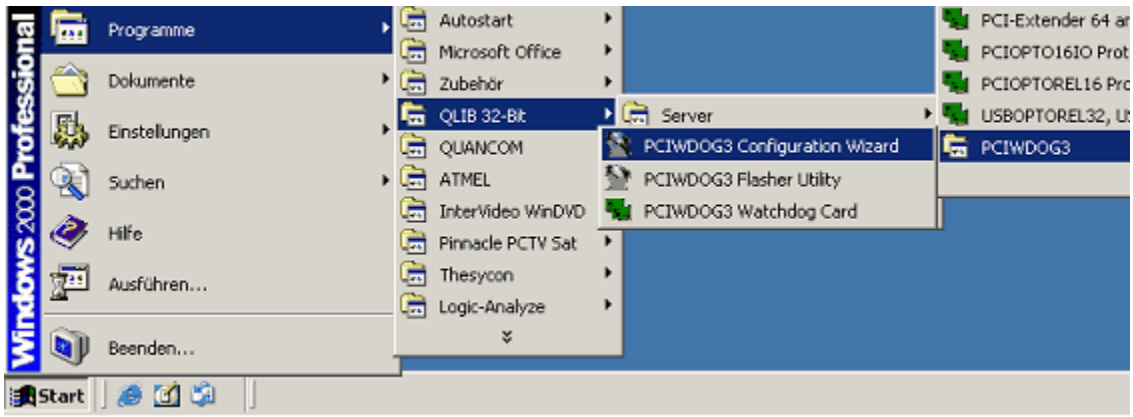
5.1 Installation of the PCIWDOG3 Configuration Wizard

The PCIWDOG3 Configuration Wizard is installed automatically with the QLIB.

5.2 Start of the PCIWDOG3 Configuration Wizard

You start the PCIWDOG3 Configuration Wizard over:

Start/Programme/QLIB 32-Bit/Programme/PCIWDOG3/PCIWDOG3 Configuration Wizard



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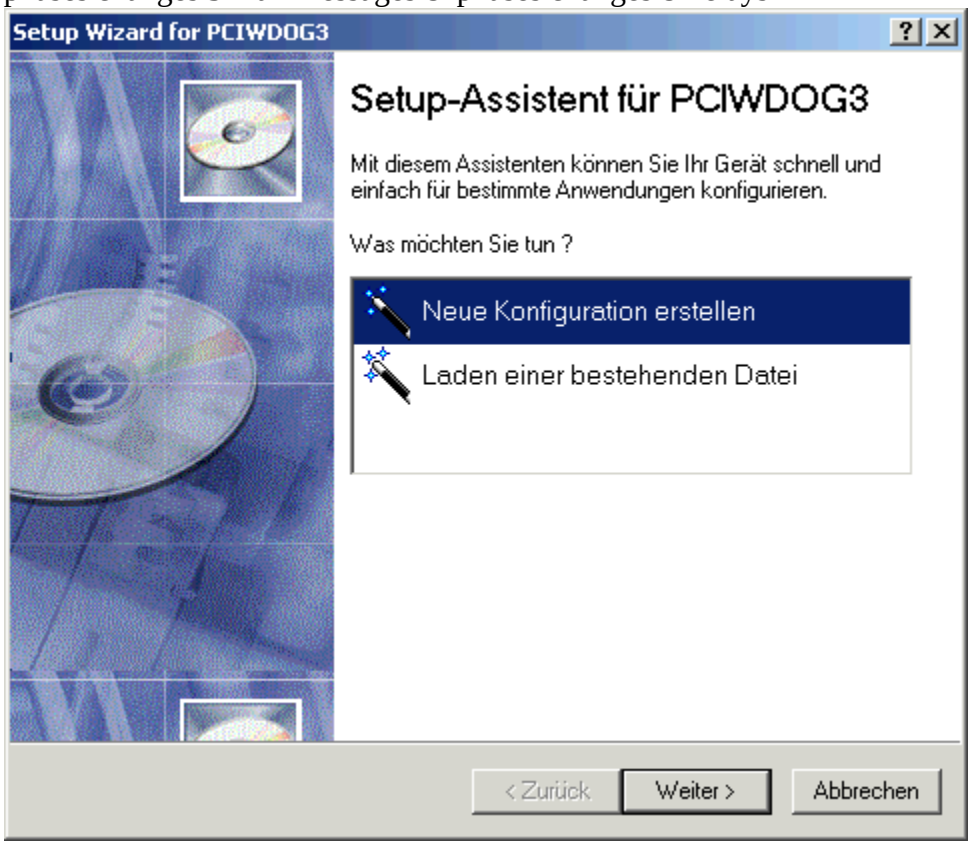
5.3 Setup assistant for PCIWDOG3

Here you can indicate the following: Computer name Description Log level 0 = LOGGING is deactivated 1 = error 2 = errors & warnings 3 = error & warnings & information 4 = all messages & phases changes 5 = all messages & phases changes & relays


Setup Wizard for PCIWDOG3
Setup-Assistent für PCIWDOG3
Mit diesem Assistenten können Sie Ihr Gerät schnell und einfach für bestimmte Anwendungen konfigurieren.
Was möchten Sie tun ?
Neue Konfiguration erstellen
Laden einer bestehenden Datei
< Zurück
Weiter >
Abbrechen

Here you can indicate the following:

- New configuration provide Here you provide a new configuration project.

- Load an existing file Here you can load a stored configuration project.

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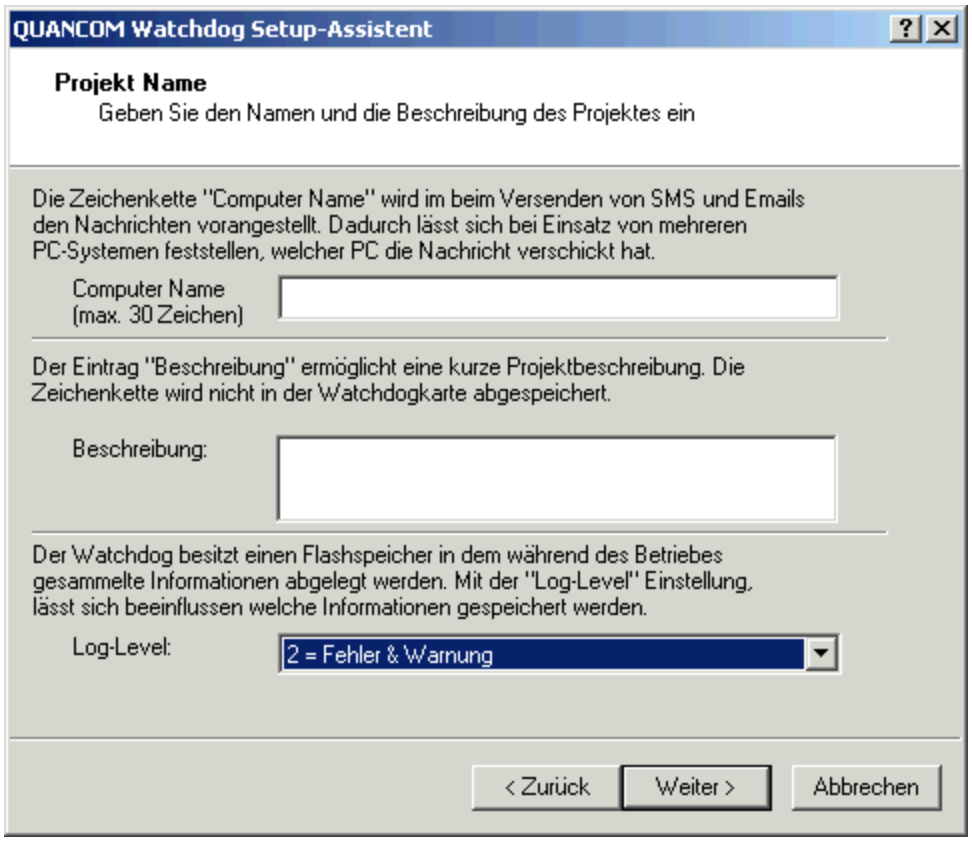
5.4 Configuration of the relay inverting


QUANCOM Watchdog Setup-Assistent
Projekt Name
Geben Sie den Namen und die Beschreibung des Projektes ein
Die Zeichenkette "Computer Name" wird im beim Versenden von SMS und Emails den Nachrichten vorangestellt. Dadurch lässt sich bei Einsatz von mehreren PC-Systemen feststellen, welcher PC die Nachricht verschickt hat.
Computer Name (max. 30 Zeichen)
Der Eintrag "Beschreibung" ermöglicht eine kurze Projektbeschreibung. Die Zeichenkette wird nicht in der Watchdogkarte abgespeichert.
Beschreibung:
Der Watchdog besitzt einen Flashspeicher in dem während des Betriebes gesammelte Informationen abgelegt werden. Mit der "Log-Level" Einstellung, lässt sich beeinflussen welche Informationen gespeichert werden.
Log-Level:
2 = Fehler & Warnung
< Zurück
Weiter >
Abbrechen

Here you can indicate the following:

- Computer name
- Description

Log Level

- 0 = LOGGING is deactivated
- 1 = error
- 2 = errors & warnings
- 3 = error & warnings & information
- 4 = all messages & phases changes
- 5 = all messages & phases changes & relays

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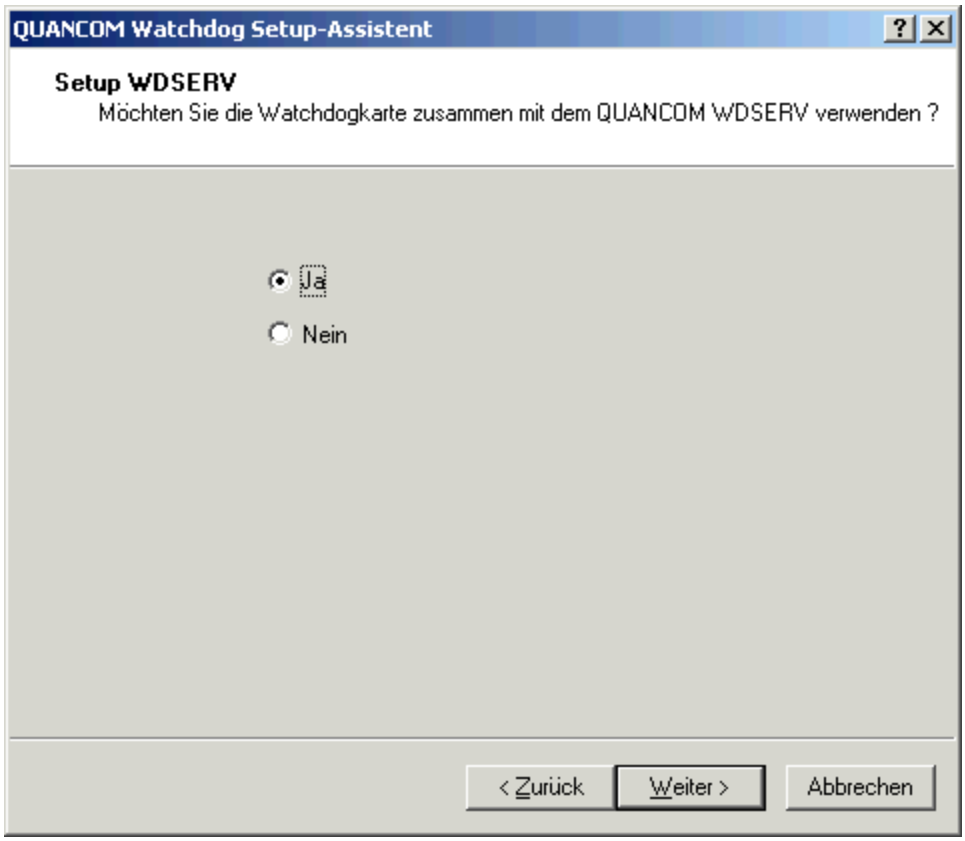
5.5 Setup WDSERV



Here you can indicate the following:

- Yes The WDSERV service is to be used. This must be installed separately.)
- No (the WDSERV service is not used.)

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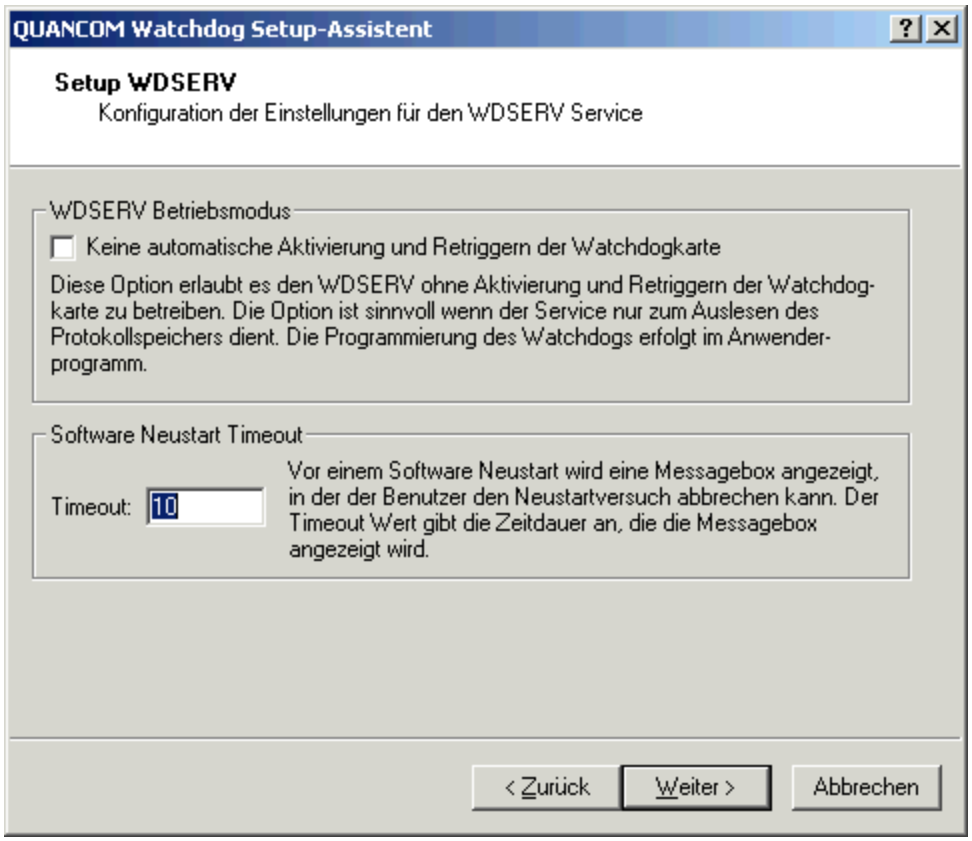
5.6 Configure the WDSERV


QUANCOM Watchdog Setup-Assistent
Setup WDSERV
Konfiguration der Einstellungen für den WDSERV Service
WDSERV Betriebsmodus
Keine automatische Aktivierung und Retriggern der Watchdogkarte
Diese Option erlaubt es den WDSERV ohne Aktivierung und Retriggern der Watchdog-karte zu betreiben. Die Option ist sinnvoll wenn der Service nur zum Auslesen des Protokollspeichers dient. Die Programmierung des Watchdogs erfolgt im Anwender-programm.
Software Neustart Timeout
Timeout: 10
Vor einem Software Neustart wird eine Messagebox angezeigt, in der der Benutzer den Neustartversuch abbrechen kann. Der Timeout Wert gibt die Zeitdauer an, die die Messagebox angezeigt wird.
< Zurück
Weiter >
Abbrechen

Here you can indicate the following:

☑ WDSERV Operating mode

- Software restart Timeout

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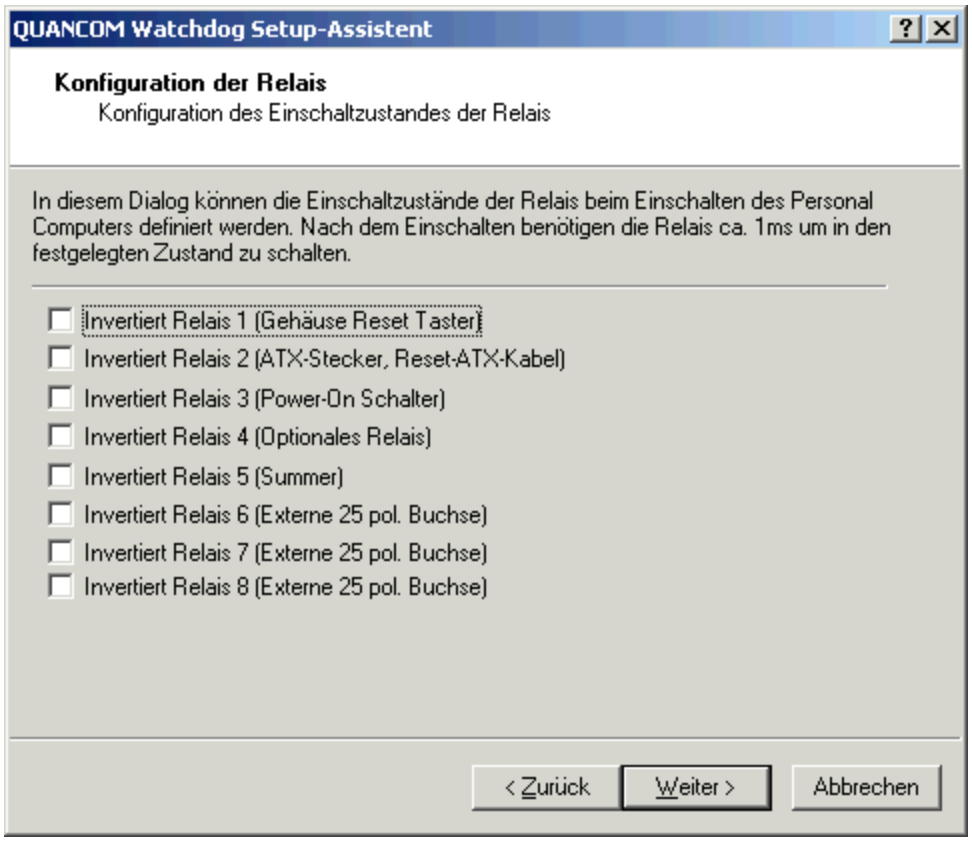
5.7 Configuration of the relays


QUANCOM Watchdog Setup-Assistent
Konfiguration der Relais
Konfiguration des Einschaltzustandes der Relais
In diesem Dialog können die Einschaltzustände der Relais beim Einschalten des Personal Computers definiert werden. Nach dem Einschalten benötigen die Relais ca. 1ms um in den festgelegten Zustand zu schalten.
Invertiert Relais 1 (Gehäuse Reset Taster)
Invertiert Relais 2 (ATX-Stecker, Reset-ATX-Kabel)
Invertiert Relais 3 (Power-On Schalter)
Invertiert Relais 4 (Optionales Relais)
Invertiert Relais 5 (Summer)
Invertiert Relais 6 (Externe 25 pol. Buchse)
Invertiert Relais 7 (Externe 25 pol. Buchse)
Invertiert Relais 8 (Externe 25 pol. Buchse)
< Zurück
Weiter >
Abbrechen

Here you can indicate the following:

☑ Inverted Relays ...

Inverted the selected relay.

Normal condition: In a state of rest the relay is open, for the switching event is closed and afterwards again open it.

Inverted condition: Behaves exactly inverted to the normal condition. Here the relay is always closed and to the switching event opened.

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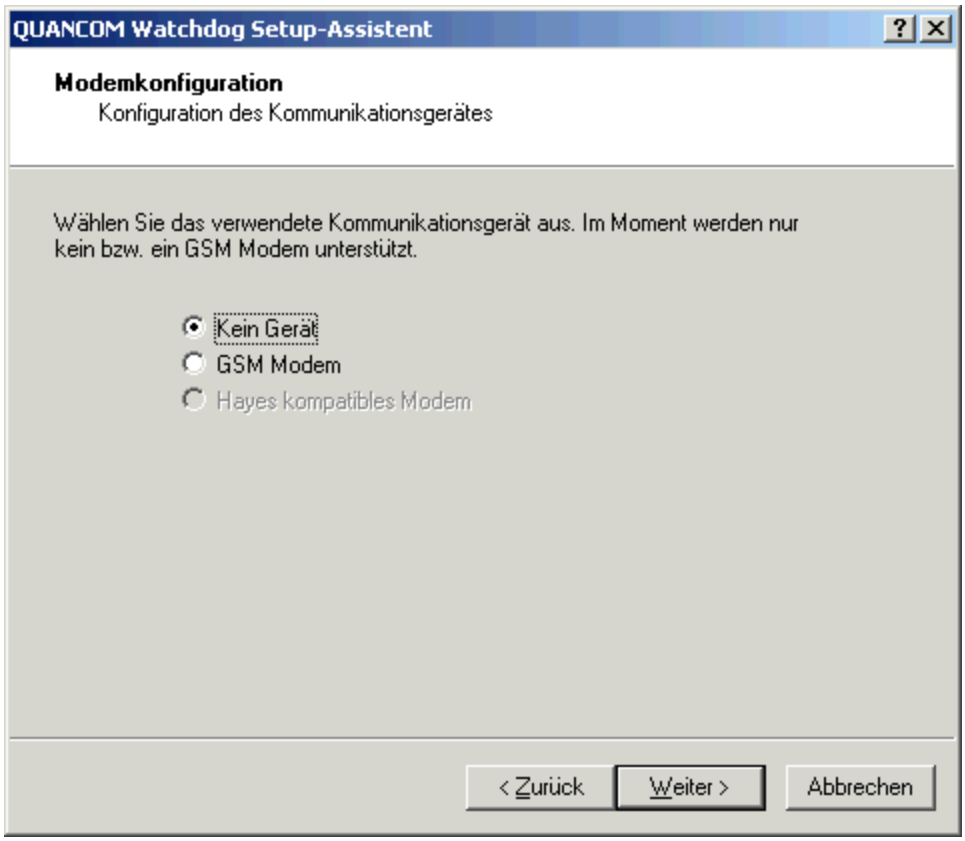
5.8 Modemkonfiguration



Here you can indicate the following:

- No equipment
- GSM modem

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5.9 GSM Modem Setup

QUANCOM Watchdog Setup-Assistent
GSM Modem Setup
Konfiguration des GSM Modems
Nachdem ein GSM Modem mit der Watchdogkarte verbunden haben, werden eventuell im Speicher vorhanden Nachrichten ausgeführt. Bitte löschen Sie alle Nachrichten, bevor Sie das GSM Modem anschliessen.
Falls die SIM-Karte eine PIN hat, geben Sie ihn bitte hier ein:
PIN-Code:
Baudrate:
19200
Der Watchdog kann eingehende SMS Nachrichten empfangen. Diese Nachrichten können an den Absender automatisch bestätigt werden. Die Aktivierung der Einstellung kann zusätzliche Kosten verursachen.
Automatische SMS Bestätigung an SMS Absender verschicken.
< Zurück
Weiter >
Abbrechen

Here you can indicate the following:

- Pin code

- Baud rate
- Information to the Baud rate of your modem finds you in the guidance of the modem.

☑ Automatic SMS confirmation

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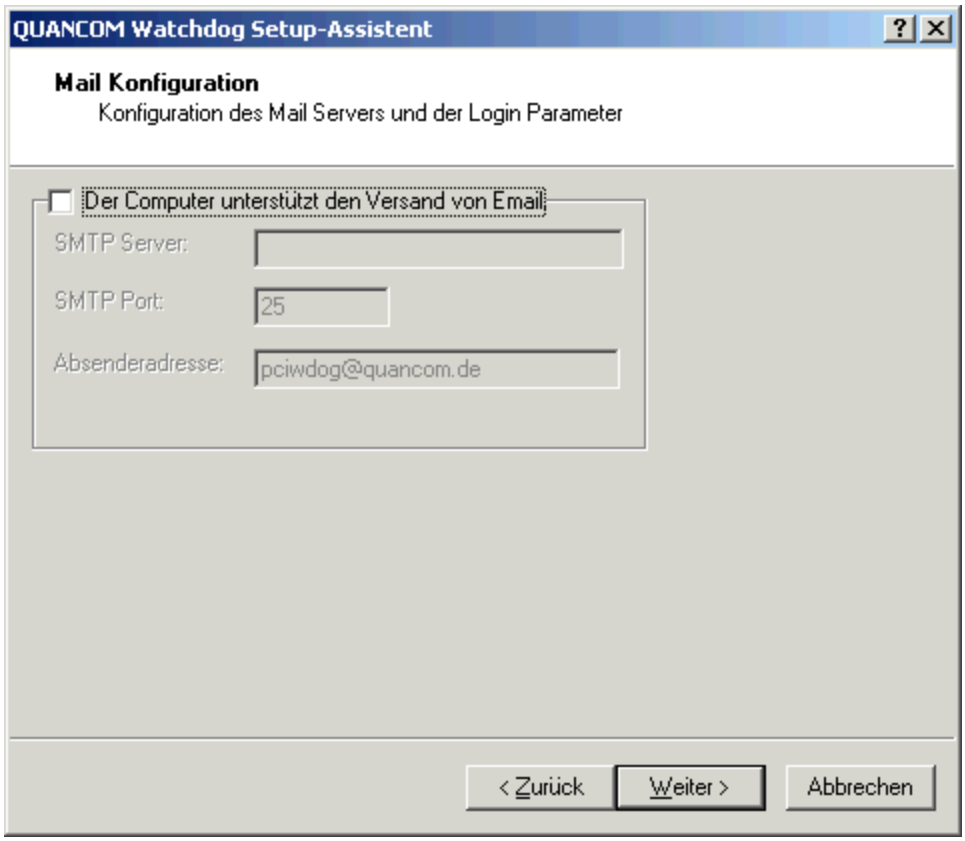
5.10 Mail configuration



Here you can indicate the following:

☑ The computer supports the dispatch of enamels

- Smtp server
- Smtp haven
- Return address

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5.11 Insert from variables of the Watchdogkarte into a SMS text

Before sending a SMS away the text which can be sent is worked on by a text Parser. The Parser looks for variables, which it equips then when dispatching with appropriate variables of the Watchdogcard in from you entered the text for BYTE or WORD. With the help of this variables you can use current events from the main memory of the PCIWDOG3/4. Like that e.g. the selection of temperature levels is possible.

Function text of the Parsers

A Parse command begins and ends with a” #”.
After # follows a” B” or” W”. Then the variable number follows and afterwards second” #”
” B” and/or” W” steers the access to BYTE or WORD variable. The number following on it, indicates the variable number.

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BYTE Variablen:

- Var=1 Current phase
- Var=2 Last active phase (before the change to the current)
- Var=3 Determines the relay inverting (Bit0=Relais 0, bit 7=Relais 7)
- Var=4 LED status the GREEN LED (0=AUS/1=Treiber loaded/2=Watchdog
- Var=5 LED status RED LED (0=AUS/1=AN)
- Var=6 Current phases Goto filter
- Var=7 Current SMS status (here you get a number spent those, one of the following meanings have.)

  GSM modem function deactivates

  1=GSM modem not recognized by the interface
  2=Serielle transmission of OK ONE (Baud rate is correct)
  3=GSM modem type was recognized
  50=GSM-synchronisation of OK ONE (recessed)
  51=GSM-synchronisation bath (not in-booked)
  52=GSM-synchronisation draws (was in-booked, now no longer)
  90=Kein sending possible
  98=PIN-Code falsch0=
- Var=8-11 Current temperature of the temperature sensor 8-11

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WORD Variablen:

- Var=1 Current Watchdog timer (unit is 0.1 second).
  If active, then he counts to 0 down
- Var=2-9 Current relay timer for the 8 relays (unit is 0.1 second).
  If active, then he counts to 0 down
- Var=10-17 Current COUNT he values of the internal 8 Counter
- Var=18 Opto coupler condition (bit 0 Opto 0 /// bit 7 - Opto 7
  /// bit 8 - optionally input) /// bit is 1=aktiv
- Var=19-26 A/D of values channel 0-7

Example of the byte variables:

The text for a SMS reads:	The CCU has a temperature of #B8# degrees Celsius.
Then they receive the SMS on your mobile phone:	The CCU has a temperature of 53 degrees Celsius.

Example of the WORD variables:

The text for a SMS reads	The relay timer for the relay 8 amounts to #W8# tenth seconds.
Then you receive the SMS on your mobile phone:	The relay timer for the relay 8 amounts to 5 tenth seconds.

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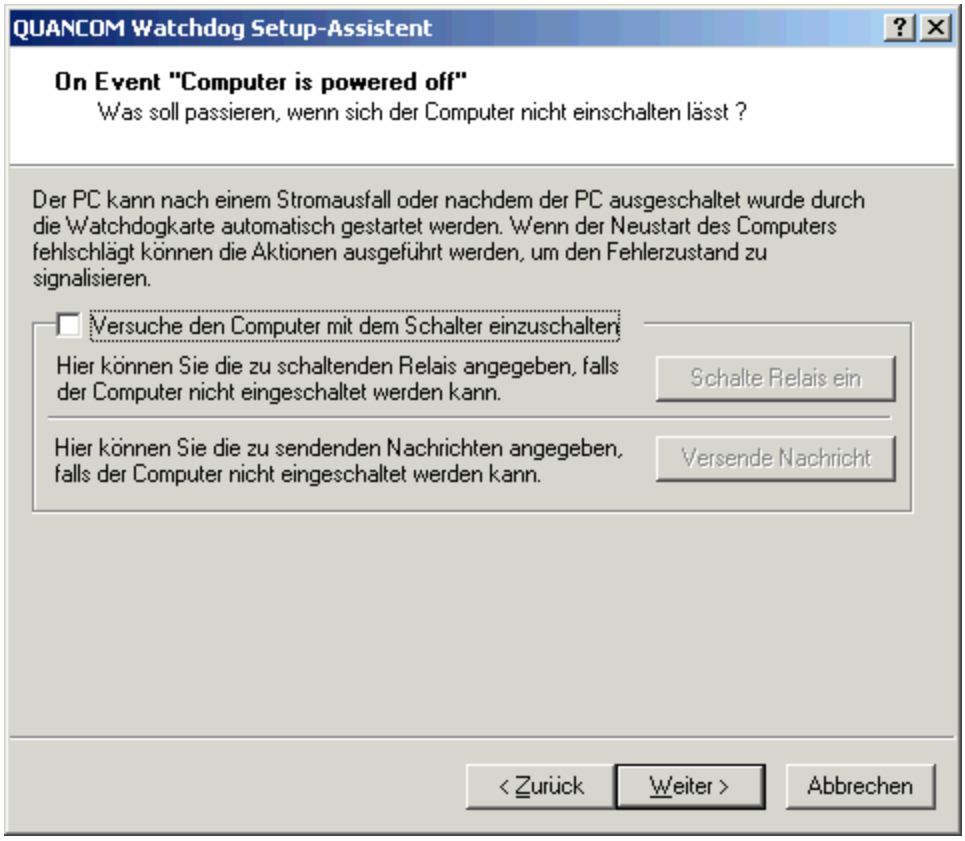
5.12 On Event "Computer is powered off"

Their PC does not start no more?

Then you can stop here the actions, which are to be implemented then.


QUANCOM Watchdog Setup-Assistent
On Event "Computer is powered off"
Was soll passieren, wenn sich der Computer nicht einschalten lässt ?
Der PC kann nach einem Stromausfall oder nachdem der PC ausgeschaltet wurde durch die Watchdogkarte automatisch gestartet werden. Wenn der Neustart des Computers fehlschlägt können die Aktionen ausgeführt werden, um den Fehlerzustand zu signalisieren.
Versuche den Computer mit dem Schalter einzuschalten
Hier können Sie die zu schaltenden Relais angegeben, falls der Computer nicht eingeschaltet werden kann.
Schalte Relais ein
Hier können Sie die zu sendenden Nachrichten angegeben, falls der Computer nicht eingeschaltet werden kann.
Versende Nachricht
< Zurück
Weiter >
Abbrechen

So that the Watchdogcard can turn the PC on again, the POWER ON must be attached cables.

The following actions can be selected:

☑Tries the computer with the switch to switch on

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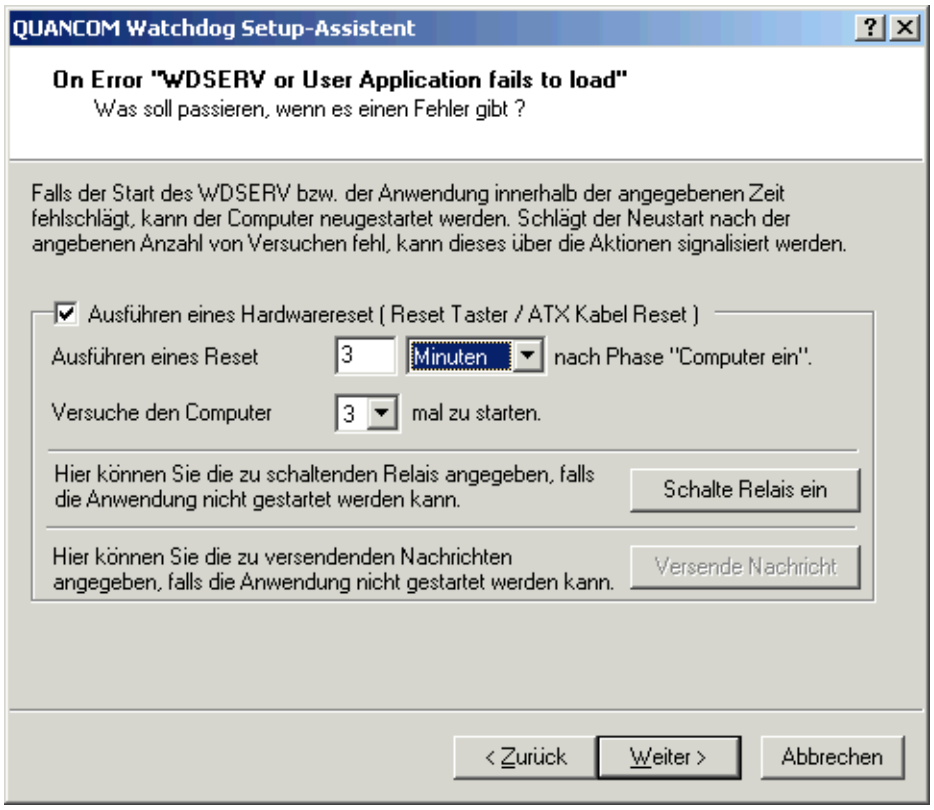
5.13 On Error "WDSERV or User Application fails to load"

Under this point you have the possibility to decide which to pass are, if your PC starts perfectly, however the operating system are not perfectly started.


QUANCOM Watchdog Setup-Assistent
On Error "WDSERV or User Application fails to load"
Was soll passieren, wenn es einen Fehler gibt ?
Falls der Start des WDSERV bzw. der Anwendung innerhalb der angegebenen Zeit fehlschlägt, kann der Computer neugestartet werden. Schlägt der Neustart nach der angebenen Anzahl von Versuchen fehl, kann dieses über die Aktionen signalisiert werden.
Ausführen eines Hardwarereset (Reset Taster / ATX Kabel Reset)
Ausführen eines Reset
3
Minuten
nach Phase "Computer ein".
Versuche den Computer
3
mal zu starten.
Hier können Sie die zu schaltenden Relais angegeben, falls die Anwendung nicht gestartet werden kann.
Schalte Relais ein
Hier können Sie die zu versendenden Nachrichten angegeben, falls die Anwendung nicht gestartet werden kann.
Versende Nachricht
< Zurück
Weiter >
Abbrechen

It must be attached the RESET CABLE or the optional WDOG-ATX-Kab2.

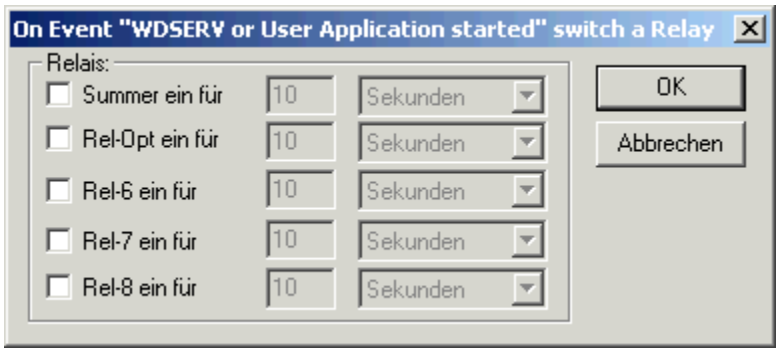
The following actions can be selected:

☑ Implement one Hardware-Reset

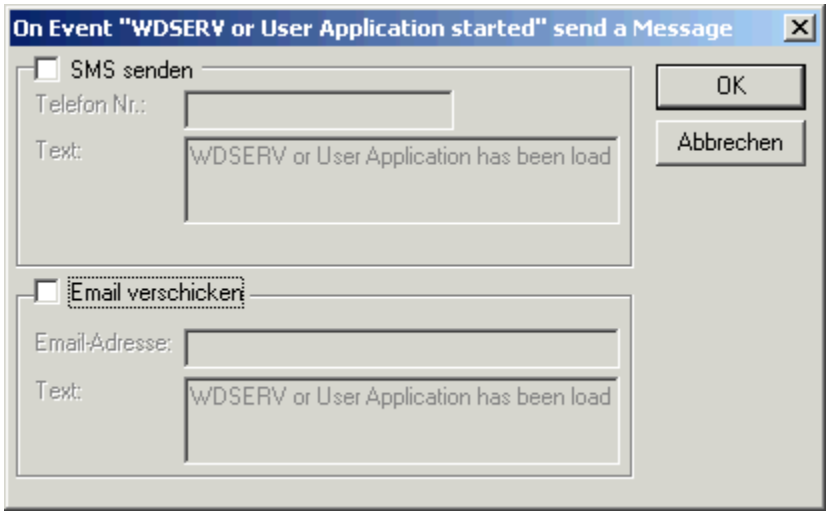
Implement a RESET…. after phase" computers"

Tries to start the computer times

5.13.1 Attitudes for SMS/Mail/Relais/Shutdown for each side



☑ **Here you can indicate the switching times for the relays**



Here you can indicate the following:

☑ **SMS send (a condition is an attached GSM modem)**

☑ **Email send (a condition is an existing Internet connection)**

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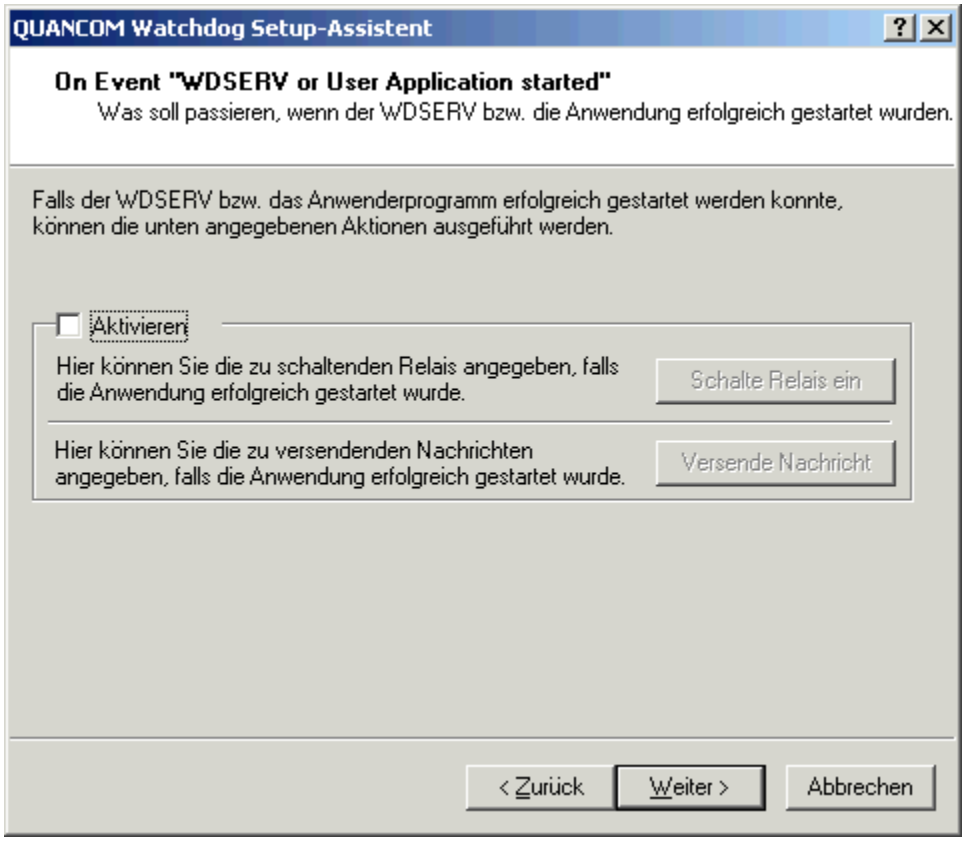
5.14 On Event "WDSERV or User Application fails to load"

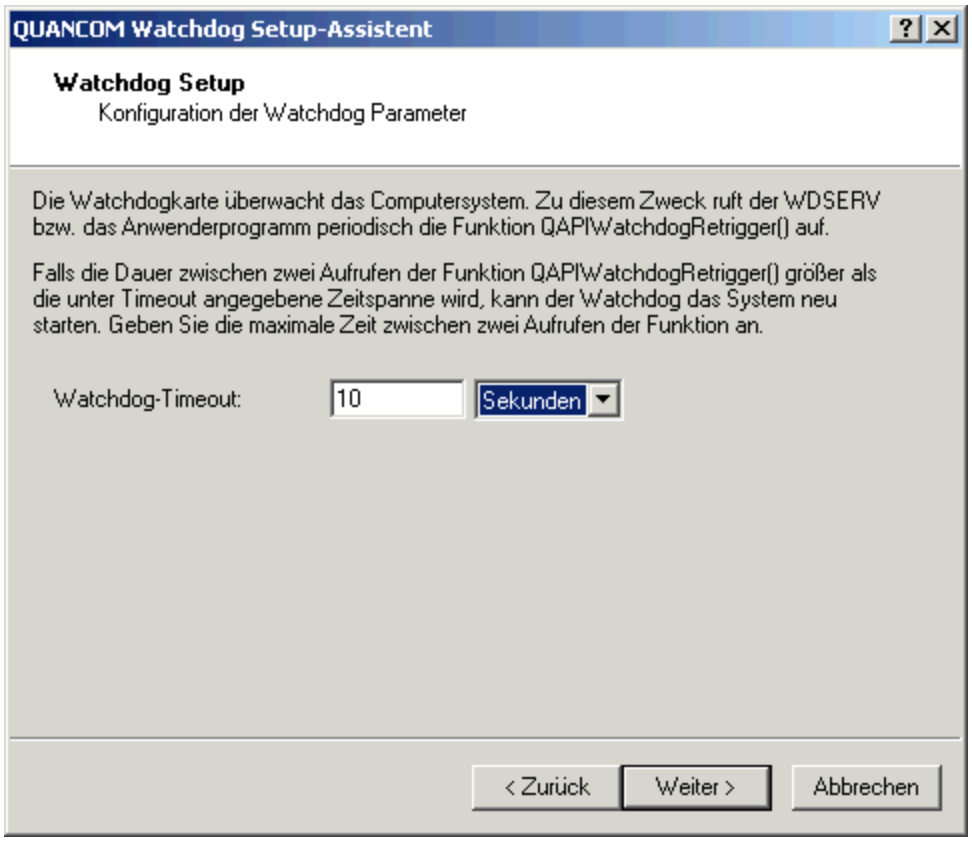
Under this point you have the possibility to decide whether the PCIWDOG3/4 Them to communicate is, if the operating system started the WDSERV service perfectly.


QUANCOM Watchdog Setup-Assistent
On Event "WDSERV or User Application started"
Was soll passieren, wenn der WDSERV bzw. die Anwendung erfolgreich gestartet wurden.
Falls der WDSERV bzw. das Anwenderprogramm erfolgreich gestartet werden konnte, können die unten angegebenen Aktionen ausgeführt werden.
Aktivieren
Hier können Sie die zu schaltenden Relais angegeben, falls die Anwendung erfolgreich gestartet wurde.
Schalte Relais ein
Hier können Sie die zu versendenden Nachrichten angegeben, falls die Anwendung erfolgreich gestartet wurde.
Versende Nachricht
< Zurück
Weiter >
Abbrechen

The following actions can be selected:

☑ Activate

5.15 Watchdog Setup


QUANCOM Watchdog Setup-Assistent
Watchdog Setup
Konfiguration der Watchdog Parameter
Die Watchdogkarte überwacht das Computersystem. Zu diesem Zweck ruft der WDSERV bzw. das Anwenderprogramm periodisch die Funktion QAPIWatchdogRetrigger() auf.
Falls die Dauer zwischen zwei Aufrufen der Funktion QAPIWatchdogRetrigger() größer als die unter Timeout angegebene Zeitspanne wird, kann der Watchdog das System neu starten. Geben Sie die maximale Zeit zwischen zwei Aufrufen der Funktion an.
Watchdog-Timeout:
10
Sekunden
< Zurück
Weiter >
Abbrechen

Watchdog Timout

5.15.1 Enable Watchdog

Under this point you have to activate the possibility the Watchdog function.

QUANCOM Watchdog Setup-Assistent
On Event "Watchdog has been activated"
Was soll passieren, wenn der Watchdog per Softwarebefehl aktiviert wurde.
Nachdem der WDSERV bzw. das Anwendungsprogramm die Funktion QAPIWatchdogEnable() bzw. QAPIWatchdogRetrigger() aufgerufen hat und der Watchdog dadurch aktiviert wurde, kann der Watchdog dieses Ereignis über eine der unten angegeben Funktionen signalisieren.
Aktivieren
Hier können Sie die zu schaltenden Relais angegeben, falls der Watchdog aktiviert wurde.
Schalte Relais ein
Hier können Sie die zu versendenden Nachrichten angegeben, falls die Anwendung erfolgreich gestartet wurde.
Versende Nachricht
< Zurück
Weiter >
Abbrechen

The following actions can be selected:

☑ Activate

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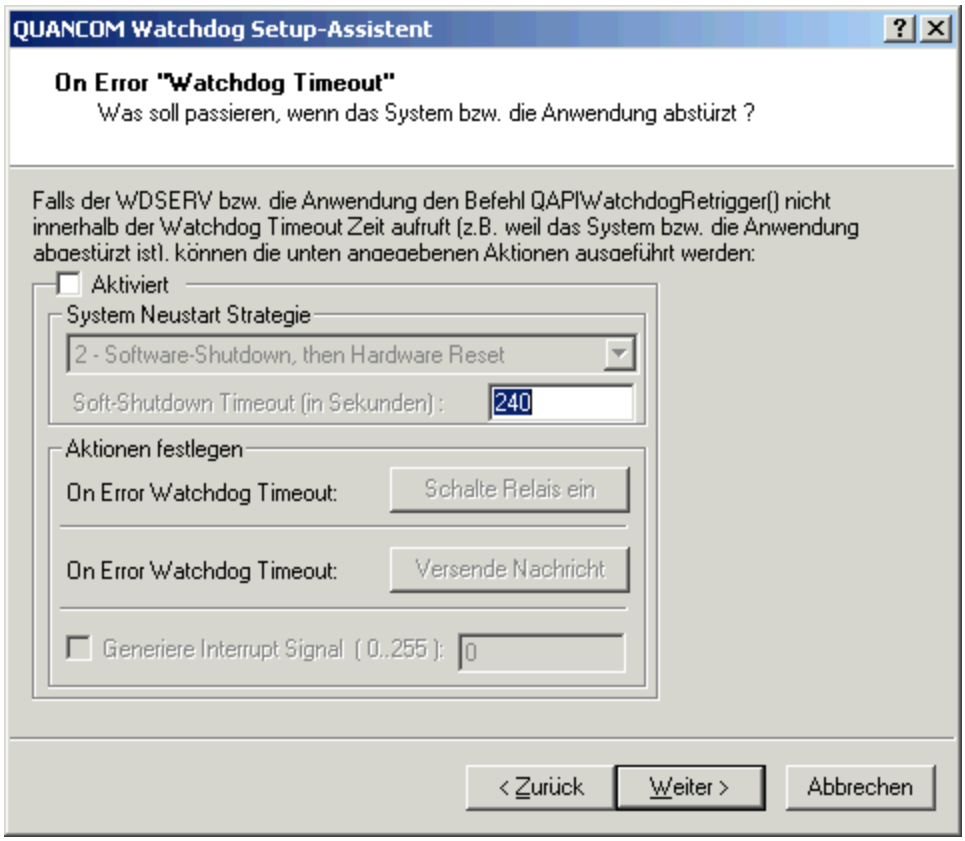
5.16 On Error "Watchdog Timeout"


QUANCOM Watchdog Setup-Assistent
On Error "Watchdog Timeout"
Was soll passieren, wenn das System bzw. die Anwendung abstürzt ?
Falls der WDSERV bzw. die Anwendung den Befehl QAPIWatchdogRetrigger() nicht innerhalb der Watchdog Timeout Zeit aufruft (z.B. weil das System bzw. die Anwendung abgestürzt ist), können die unten angegebenen Aktionen ausgeführt werden:
Aktiviert
System Neustart Strategie
2 - Software-Shutdown, then Hardware Reset
Soft-Shutdown Timeout (in Sekunden) :
240
Aktionen festlegen
On Error Watchdog Timeout:
Schalte Relais ein
On Error Watchdog Timeout:
Versende Nachricht
Generiere Interrupt Signal (0..255):
0
< Zurück
Weiter >
Abbrechen

The following actions can be selected:

☑ Activate

System reboot Strategy:

- 0 no action
- 1 - Software restart
- 2 - Software restart (with Timeout: Hardware RESET)
- 3 - Software restart (with Timeout: PC switch off)
- 4 - Immediate hardware RESET
- 5 - Switch PC off (Rel POWER)

☑ Send (via IRQ) a message to the application (0..255)

For the function of a hardware RESET you must attach the RESET cable and/or WDOG-ATX-Kab2. For the function of a power off and/or an power on you must attach the power on cable.

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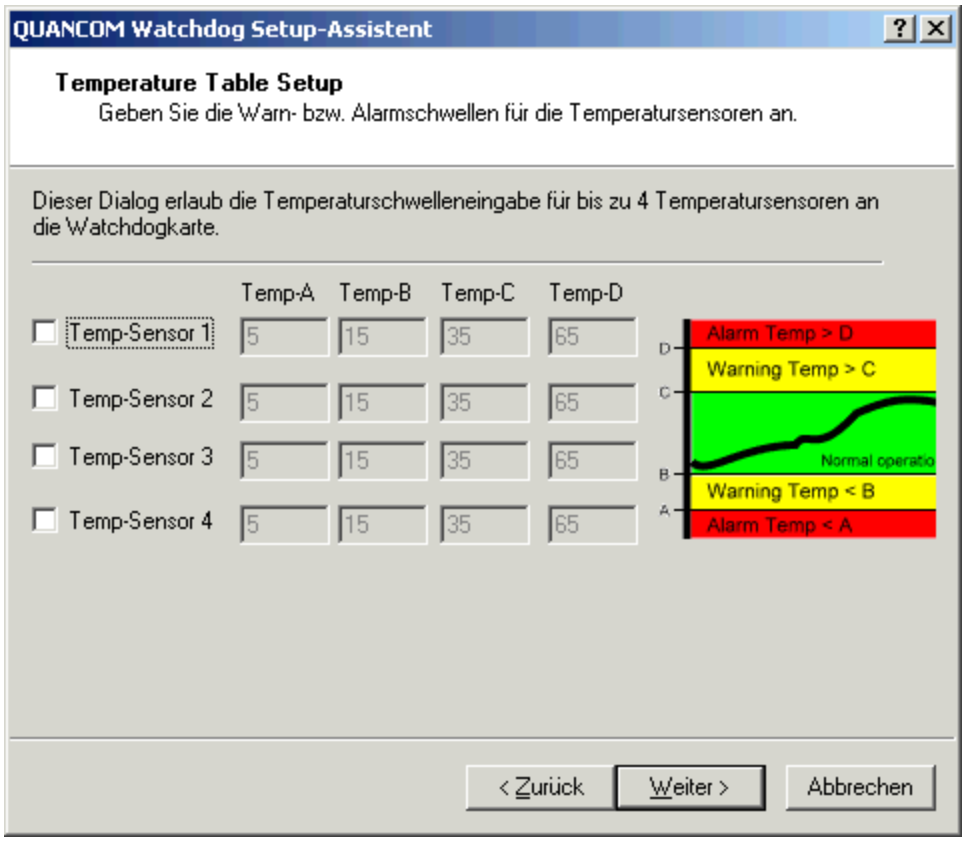
5.17 Temperatur Events



It must be attached a cable with temperature sensors.

Here you can indicate the following:

- A: indicates a critical Tiefpunkt for the temperature.
- Temp b: indicates a Tiefpunkt for the temperature.
- Temp C: an excess for the temperature indicates
- Temp D: a critical conveyance for the temperature indicates.

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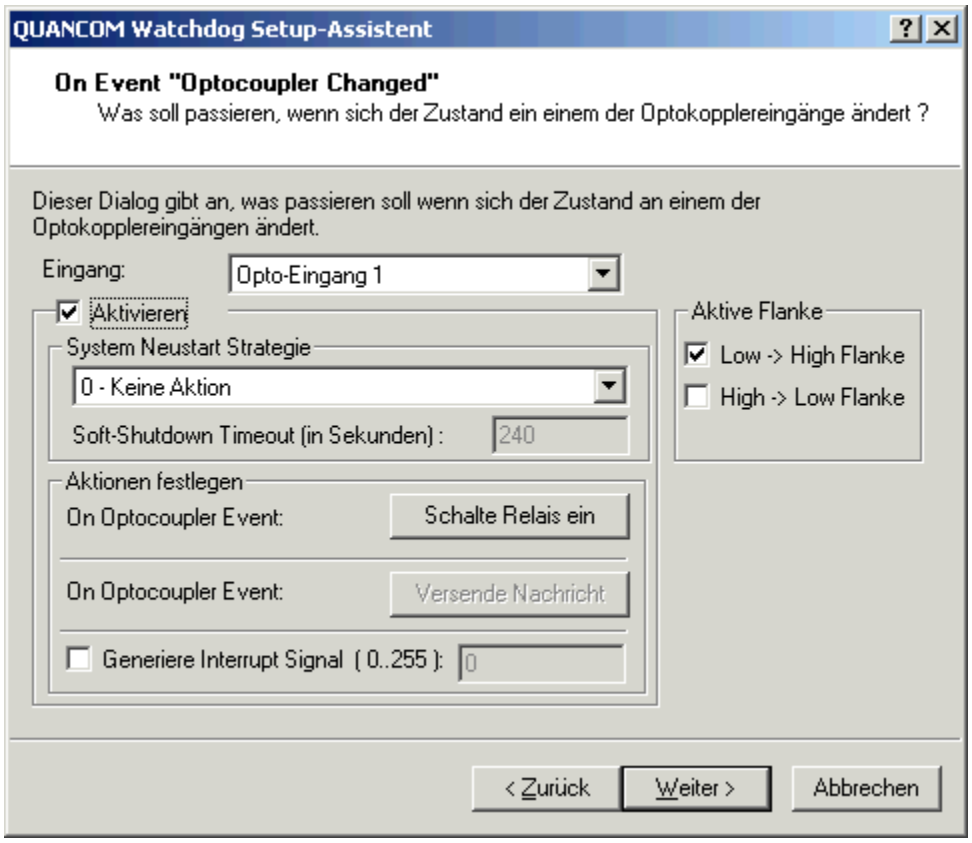
5.18 On Event "Optocoupler Changed"

Hier können Sie die 8 Optokoppler bzw. den optionalen Eingang auf bestimmte Ereignisse hin programmieren und einstellen.



Folgende Aktionen können ausgewählt werden:

☑ Aktivieren

☑ Aktive Flanke

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System Neustart Strategie:

- **0 – Keine Aktion**
- **1 – Software Restart**
- **2 – Software Restart (bei Timeout: Hardware-Reset)**
- **3 – Software Restart (bei Timeout: PC ausschalten)**
- **4 – Sofortiger Hardware-Reset**
- **5 – PC ausschalten (Rel-POWER)**
- **6 – PC einschalten (Rel-POWER)**

☑ **Send (via IRQ) a message to the application (0..255)**

It must be attached to the opto couplers a cable. For the function of a hardware RESET you must attach the RESET cable and/or WDOG-ATX-Kab2. For the function of a power off and/or an power on you must attach the power on cable.

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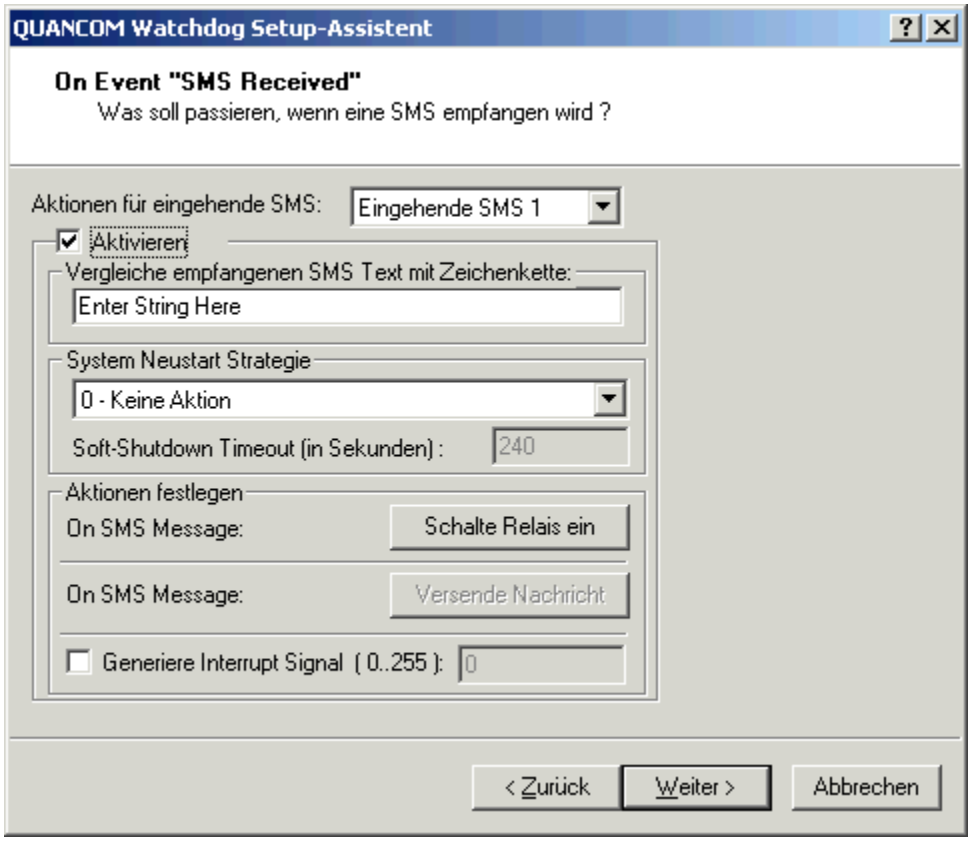
5.19 On Event "SMS Received"

Here you can up to 4 SMS texts indicate on those, which is to react to PCIWDOG3/4.



It must be attached a GSM modem.

Here for example actions can like" computers drive down" or" computers switch off" by SMS to be sent.

The following actions can be selected:

☑ Aktivieren

- Vergleiche empfangenen SMS Text mit Zeichenkette

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System Neustart Strategie:

- **0 – Keine Aktion**
- **1 – Software Restart**
- **2 – Software Restart (bei Timeout: Hardware-Reset)**
- **3 – Software Restart (bei Timeout: PC ausschalten)**
- **4 – Sofortiger Hardware-Reset**
- **5 – PC ausschalten (Rel-POWER)**
- **6 – PC einschalten (Rel-POWER)**

☑ **Send (via IRQ) a message to the application (0..255)**

For the function of a hardware RESET you must attach the RESET cable and/or WDOG-ATX-Kab2. For the function of a power off and/or an power on you must attach the power on cable.

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5.20 Save Configuration

Save configuration
Aktualisierung der Konfiguration
Der nächste Schritt erlaubt Ihnen die Konfiguration in den PCIWDOG3 Flash Speicher und / oder in eine Datei zu speichern. Mehrere Einträge können gleichzeitig ausgewählt werden.
Was möchten Sie tun ?
Aktualisierung des Flash Speichers
Speichern der Konfigurationsdatei
< Zurück
Weiter >
Abbrechen

Here you can indicate the following:

Actualization of the Flash of memory

Their changes are written in the Flash memory of the PCIWDOG3/4.

Memory of the configuration file

Their configuration file is put down on a data medium of your choice.

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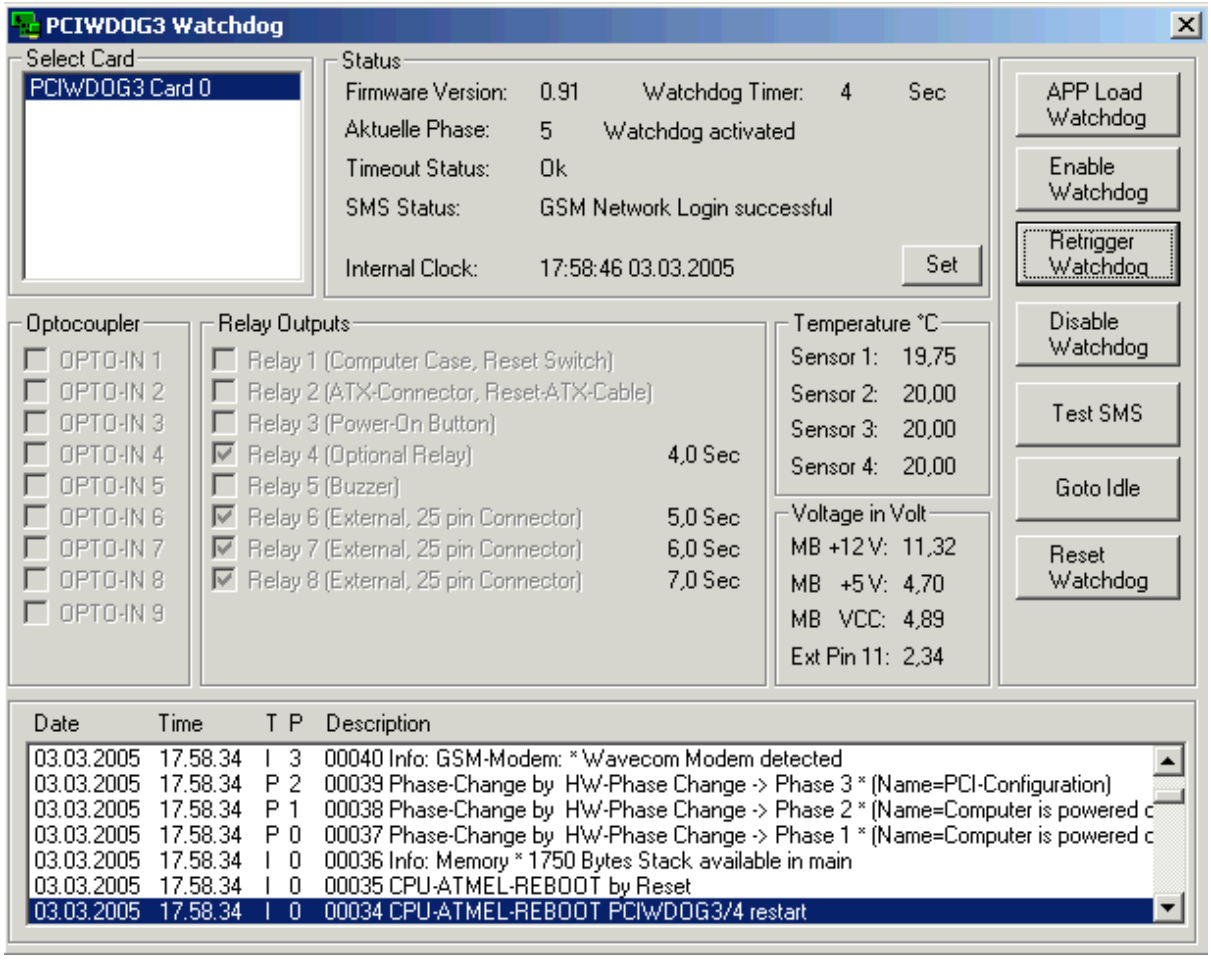
6. Test routine under Windows


PCIWDOG3 Watchdog
Select Card
PCIWDOG3 Card 0
Status
Firmware Version: 0.91
Watchdog Timer: 4 Sec
Aktuelle Phase: 5
Watchdog activated
Timeout Status: Ok
SMS Status: GSM Network Login successful
Internal Clock: 17:58:46 03.03.2005
Set
APP Load Watchdog
Enable Watchdog
Retrigger Watchdog
Disable Watchdog
Test SMS
Goto Idle
Reset Watchdog
Optocoupler
OPTO-IN 1
OPTO-IN 2
OPTO-IN 3
OPTO-IN 4
OPTO-IN 5
OPTO-IN 6
OPTO-IN 7
OPTO-IN 8
OPTO-IN 9
Relay Outputs
Relay 1 (Computer Case, Reset Switch)
Relay 2 (ATX-Connector, Reset-ATX-Cable)
Relay 3 (Power-On Button)
Relay 4 (Optional Relay) 4,0 Sec
Relay 5 (Buzzer)
Relay 6 (External, 25 pin Connector) 5,0 Sec
Relay 7 (External, 25 pin Connector) 6,0 Sec
Relay 8 (External, 25 pin Connector) 7,0 Sec
Temperature °C
Sensor 1: 19,75
Sensor 2: 20,00
Sensor 3: 20,00
Sensor 4: 20,00
Voltage in Volt
MB +12 V: 11,32
MB +5 V: 4,70
MB VCC: 4,89
Ext Pin 11: 2,34
Date Time T P Description
03.03.2005 17.58.34 I 3 00040 Info: GSM-Modem: * Wavecom Modem detected
03.03.2005 17.58.34 P 2 00039 Phase-Change by HW-Phase Change -> Phase 3 * (Name=PCI-Configuration)
03.03.2005 17.58.34 P 1 00038 Phase-Change by HW-Phase Change -> Phase 2 * (Name=Computer is powered c
03.03.2005 17.58.34 P 0 00037 Phase-Change by HW-Phase Change -> Phase 1 * (Name=Computer is powered c
03.03.2005 17.58.34 I 0 00036 Info: Memory * 1750 Bytes Stack available in main
03.03.2005 17.58.34 I 0 00035 CPU-ATMEL-REBOOT by Reset
03.03.2005 17.58.34 I 0 00034 CPU-ATMEL-REBOOT PCIWDOG3/4 restart

The PCIWDOG3/4 test routine serves for it your own attitudes to test. In the lower large box you see the log file, moreover you can supervise all relays of the map and read off the received temperatures.

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7. WDSERV Background program (for Windows XP / 2000 / NT 4.x)

7.1 What is the WDSERV service?

The WDSERV is a Addon for computers the 24 hours runs. The WDSERV XP, NT 4.x and Windows 2000 service implements the necessary accesses in the background to the Watchdogkarte. After a system crash the system is automatically again started. It is a pure background program, so that nobody must be announced at the computer.

7.2 Installation of the WDSERV.EXE

If the service is correctly installed and runs, the green LED should shine. In the case of errors you check please into the FAQ (Frequently Asked Questions).

Before you install the WDSERV service, you must the QLIB version 1.98o or more highly to have installed. Information and everything approximately around the QLIB take you please from the QLIB manual on that CD.

The following section presupposes that the map is already installed.

If you the WDSERV as" .ZIP" to have must unpack you first the file into before provision width unit a listing. After all files successfully unpacked are, implement in the listing" wdserv.exe". An assistant will lead you by the installation.

If the service is correctly installed, you **rebooten** again your system.

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7.3 Start and terminate the WDSERV service

- The WDSERV service does not have a configuration interface. They can examine services ” under” system control - > whether the service runs.

- Open as follows the system control for” start - > attitudes - > system attitudes”

- Click on” services” and start you the” service control manager”.

- Select the” QUANCOM WDSERV” entry.

- If the service is correctly started,” QUANCOM WDSERV” contains the entry” started”.

- The WDSERV installation program sets the service on” automatic” around the service after a restart to start automatically.
  Select the starting mode” Disabled/deactivated” if you the service temporarly to switch off would like.

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8. Firmware update on the PCIWDOG3/4

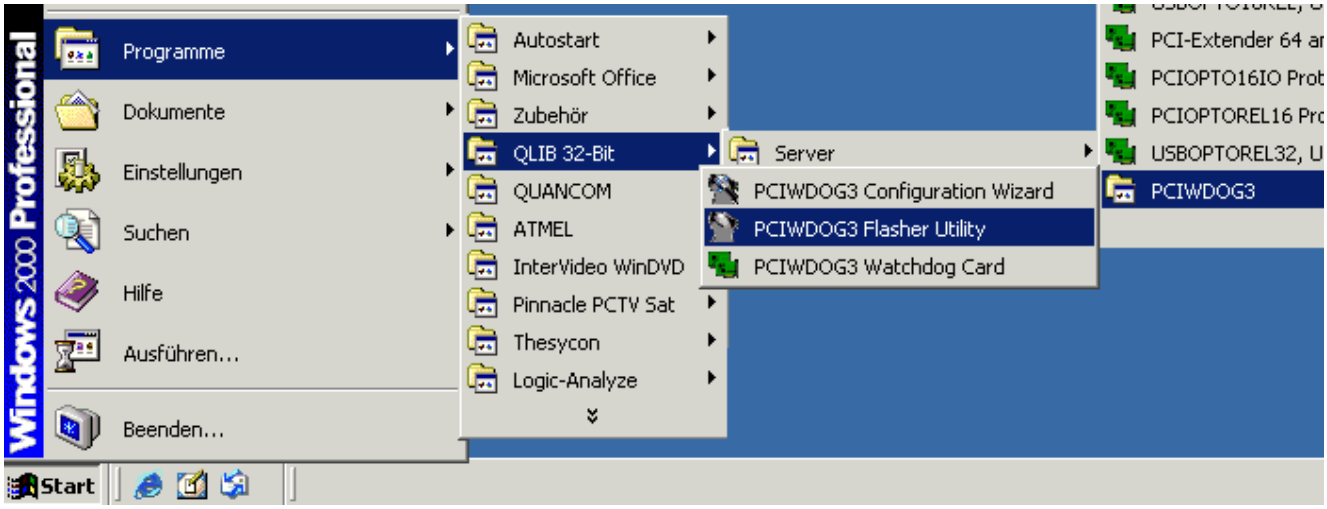
On the Watchdogkarte is a Microcontroller (ATMEGA128L von Atmel), whose programming represents the heart of the Watchdogkarte.

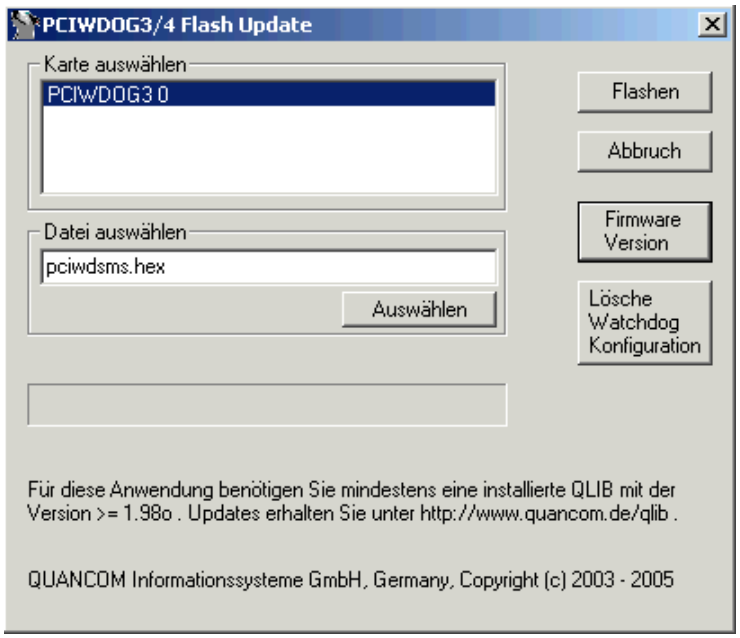
In order to profit from changes of the programming of the chip, there is the possibility of bringing these in over a" Flasher utility" on the Watchdogkarte.

8.1 Start of the PCIWDOG3 Flasher utility

You start the Flasher utility over:

Start /Programme / QLIB 32-Bit / Program / Watchdog / PCIWDOG3 Flasher Utility




PCIWDOG3/4 Flash Update
Karte auswählen
PCIWDOG3 0
Flashen
Abbruch
Firmware Version
Datei auswählen
pciwdsms.hex
Auswählen
Lösche Watchdog Konfiguration
Für diese Anwendung benötigen Sie mindestens eine installierte QLIB mit der Version >= 1.98o . Updates erhalten Sie unter http://www.quancom.de/qlib .
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9. Programming of the Watchdog Card

9.1 Which software to use ?

The software which one is necessary dependent on respective application and on the operating system. In order to be able to access the Watchdogboard, the following possibilities exist:

Method 1: High level programming (access to the map by QLIB)
Method 2: Installation of the QLIB in connection with another
Program (e.g. Sitekiosk Browser software http://www.sitekiosk.com)
Method 3: WDSERV.EXE (runs as background service on WIN XP/2000/NT)
Method 4: LINUX background program

If you liked to use the method 2, need the source text of application. If you would like to add instructions into your application, knowledge is necessary in programming.

Method 3 is the preferential method, if the system is supervised completely and the operating system Windows XP, Windows 2000 or Windows NT4.x is. The WDSERV.EXE implements a Watchdog background program.
But no user must be announced.

Method 4 is used for Linux systems. For further details you look installation CD in readme.txt in the Linux Verzeichniss on that.

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9.2 High Level Programmierung (Windows XP / 2000 / NT4.x / ME / 98 / 95)

•

9.2.1 QLIB (QUANCOM Driver Library)

The **QLIB**, which stands for **QUANCOM** Driver **LIBrary**, was developed with the target to allow the simple programming of all our data acquisition products under various operating systems. So it is easy to write an application that runs under the operating systems Windows Me/98/95 and Windows XP/2000/NT4.0. This driver interface is not limited to PC boards or other I/O adapters but is also targeted towards supporting the next product generations currently being developed. The used functions and parameters are the same for all operating systems.

Supported operating systems:

- Microsoft Windows Vista / XP / 2000 / NT 4.0 / ME / 98 / 95 und Linux

Supported compilers:

C / C++

- Borland C++ 3.1, 4.x, 5.x
- Microsoft® Visual C++ 1.x, 2.x, 4.x, 5.x, 6.x

Pascal

- Borland Turbo Pascal

Delphi

- Borland Delphi

Basic

- Microsoft® Visual Basic 3.x, 4.x, 5.x; 6.x

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Graphical Programming Language:

- Agilent VEE von Agilent
- LabView® von National Instruments

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9.2.2 Installation and general over the QLIB

Program all QUANCOM maps independently of the operating system. The QLIB (QUANCOM LIBRARY) offers the possibility of addressing all QUANCOM maps under the operating systems Windows XP/2000/NT and ME/98/95 and the programming languages C/C++/Delphi/Visual basic with simple instructions. There is thus no knowledge in the driver development necessary. In addition it is provided to all QUANCOM maps and facilitates for the user the integration into own applications.

Depending upon operating system and bus system (PCI, ISA, USB, PAR) the installations are different. Pay attention to the headings of the following chapters and select yourselves you the suitable installation.

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9.2.3 Installation for a QUANCOM PCI map and/or a USB module under Windows XP/2000

If you downloaded the QLIB of our Internet side, read please the information of the READ ME file before the installation of the drivers.

Step: Driver installation:

After you put the map into a free Slot and your system recognizes to have again started, Windows automatically a new map. Windows will thereupon the suitable driver for the map to require. Put the QLIB installation CD in the CD drive assembly” D”.

If Windows indicates the dialogue box new hardware found when starting, select far ones.
Afterwards you select please” after a suitable driver for the equipment search (recommended)” afterwards confirm you also to far one.
As source for the search for the drivers you select please a selecting you a place out and press far ones.
Windows opens now a selection of files dialogue. Click please on the switching surface selecting. Change on the CD drive assembly and select you the listing Win2000 or WinXP (depending on for which operating system you the QLIB to install would like). Now the file is suggested to you QLIBXDRV.INF: Click on OK ONE over with the installation of the driver to continue.
Confirm in the next window also to far one that you want to install the driver.
In the following windows close you the installation of the QUANCOM driver with force away on the Button finishing.

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Step: QLIB installation:

After the drivers installation of the QUANCOM map you must install still the QLIB software.

Click on start | to implementing. Select the program drive: \ qlib32.exe out and click you on OK ONE (you replace please by the drive assembly letter of your CD-ROM drive assembly to drive).
If a Messagebox should appear after starting the program Qlib32.exe, which states the fact that you must again start your system for the installation of the QLIB clicks you on, then your computer starts immediately again. (After the Reboot the installation is continued automatically)
(This step is implemented only if you installed still no version of the Installers on your system)
In the following window is continued the installation with NEXT one. (You note please that you terminated all other current Windowsprogramme before beginning of the installation)
Afterwards you confirm please the license conditions of the QLIB software with the clicking of I accept the license agreement and continue the installation with pressures of the NEXT Buttons.
Please you enter now its personal user data (name, organization). Select afterwards whether you want to install and confirm the QLIB software only for the current user or for all users of this computer (only with administrator rights possible) you your selection with NEXT one.
For changing the installation path for the QLIB software you click please on" Browse". With clicking on NEXT one the installation is continued.
Now you select please still the kind of installation of the software and confirm you these with NEXT one. Three possibilities are available:
Typical (without examples and assistance files)
Complete (with examples and assistance files)
Custom (freely selectable)
The software installation is started with the switching surface NEXT one.
After the successful installation of the QLIB software the installation program with pressures of the Buttons finishing is closed.

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In order to take over the changes at your computer, it requested your computer" to start again". Select YES around your PC to start again and/or NO again later around the PC to start.

9.2.4 Installation for a QUANCOM PCI map under Windows NT 4

If you downloaded the QLIB of our Internet side, read please the information of the READ ME file before the installation of the drivers.

1. Step: QLIB installation:

After you put the map into a free Slot and to have again started, you put your system the QLIB installation CD in the CD drive assembly" D".

Click on start | to implementing. Select the program d:\quancom.exe and click you on OK ONE.
If a quancom.exe Messagebox should appear after starting the program, which states the fact that you must again start your system for the installation of the QLIB clicks you on; then your computer starts immediately again. (After the Neumstart of your PC the installation is continued automatically)
(This step is implemented only if you installed still no version of the Installers on your system)
In the following window is continued the installation with NEXT one. (You note please that you terminated all other current Windowsprogramme before beginning of the installation)
Afterwards you confirm please the license conditions of the QLIB software with the clicking of I accept the license agreement and continue the installation with pressures of the NEXT Buttons.
Please you give now its personal user data (name; Organization;) . Select afterwards whether you want to install and confirm the QLIB software only for the current user or for all users of this computer (only with administrator rights possible) you your selection with NEXT one.
For changing the installation path for the QLIB software you click please on" Browse". With clicking on" NEXT one" the installation is continued.
Now you select please still the kind of installation of the software and confirm you these with NEXT one. Three possibilities are available:

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Typical (without examples and assistance files)
Complete (with examples and assistance files)
Custom (freely selectable)
The software installation is started with the switching surface NEXT one.
After the successful installation of the QLIB software the installation program with pressures of the Buttons finishing is closed.
In order to take over the changes at your computer, it requested your computer" to start again". Select YES around your PC to start again and/or NO again later around the PC to start.

9.2.5 Installation for a QUANCOM PCI map and/or a USB module under Windows 98SE

If you downloaded the QLIB of our Internet side, read please the information of the READ ME file before the installation of the drivers.

Step 1: Driver installation:

After you put the map into a free Slot and your system recognizes to have again started, Windows automatically a new map. Windows will thereupon the suitable driver for the map to require. Put the QLIB installation CD in the CD drive assembly" D".

If Windows indicates the dialogue box" new hardware found" when starting, select far ones.
Afterwards afterwards you select please after a suitable driver for the equipment search (recommended) confirm you also to far one.
As source for the search for the drivers you select please a selecting you a place and press far ones.
Windows opens now a selection of files dialogue. Click please on the switching surface selecting. Change on the CD drive assembly and select you the listing WinME, Win98 or Win95, depending on for which operating system you the QLIB to install would like. The file is suggested to you QUANCOM.INF: click on OK ONE over with the installation of the driver to continue.
Confirm in the next window also to far one that you want to install the driver.
In the following windows lock you the installation of the QUANCOM driver with pressures on the Button finishing.

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Step 2: QLIB installation:

After the drivers installation of the QUANCOM map you must install still the QLIB software.

Click on start | to implementing. Select the program D:\qlib32.exe and click you on OK ONE
After starting the program Qlib32.exe a Messagebox, which states, appears that you must again start your system for the installation of the QLIB.
With clicking on your computer starts immediately again. (After the Reboot the installation is continued automatically)
In the following window is continued the installation with NEXT one. (You note please that you terminated all other current Windowsprogramme before beginning of the installation)
Afterwards you confirm please the license conditions of the QLIB software also click from" I accept the license agreement" and continue you the installation with pressures of the NEXT Buttons.
Please you give now its personal user data (name; Organization). Select afterwards whether you the QLIB software only for the current user or for all users of this computer (only with administrator rights possible) to install want and confirm you your selection with NEXT one.
For changing the installation path for the QLIB software you click please on Browse. With clicking on NEXT one the installation is continued.
Now you select please still the kind of installation of the software and confirm you these with NEXT one. Three possibilities are available:
Typical (without examples and assistance files)
Complete (with examples and assistance files)
Custom (freely selectable)
The software installation is started with the switching surface NEXT one.
After the successful installation of the QLIB software the installation program with pressures of the Buttons finishing is closed.
In order to take over the changes at your computer you will start requested your computer again. Select YES around your PC to start again and/or NO again later around the PC to start.

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9.3 Activation of the Watchdogkarte

To activate the following instructions used around a Watchdogkarte.

Before the PCIWDOG3/4 is activated, the deactivation sequence must be used around the map completely to deactivate. The reason for it lies in the status register of the PCIWDOG3/4 of which all entries contains (e.g. when the Watchdog event took place).

Use the following instructions for activating the map:

QAPIWatchdogDisable ();
QAPIWatchdogEnable ();

If an Timeout event should have taken place and deactivate you the Watchdogkarte, then also the red TOut LED expires.

9.3.1 Deactivation of the Watchdogkarte

The following instructions deactivate the map:

QAPIWatchdogDisable ();

If an Timeout event should have taken place and deactivate you the Watchdogkarte, then also the red TOut LED expires.

9.3.2 The status register

The status of a Watchdogkarte can be picked out from the status registers. The status register informs you whether the map is activated and a Watchdog event took place. The latter is to be found out very useful over whether the computer was out switched/, or again started by an Watchdog event.

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9.3.3 Several Watchdogkarten

It is possible, several Watchdogkarten in a computer to used. That particularly is of advantage, if one uses special applications, which need another monitoring mode. The status of all Watchdogkarten is picked out by a main case. If you use the Watchdogkarte in the environment described before, you can access each map individually.

That is released by the following instruction:

QAPIExtOpenCard (ULONG cardid, ULONG devnum).

9.3.4 Tests of the map and other information

After the map is activated shines the green LED shows that the map is" ready". If an Timeout event took place, the relay short circuits the RESET tracer of the computer on the map: the red LED turns on.
They can try the operability out of the map simply through pressures of the" break key". They cannot continue working and the Watchdogkarte start the computer, as a function of the Timeout time, again.

9.3.5 Example C QLIB application

```
#include "windows.h"
#include "conio.h"
#include "stdio.h"

#include "include\qlib.h"

void main (void)
{
QAPIWatchdogDisable();
QAPIWatchdogEnable();
printf("PWDOG activated ... Press any key \n");
getch();

QAPIWatchdogRetrigger();
printf("PWDOG retriggered ... Press any key \n");
getch();

QAPIWatchdogDisable();
printf("PWDOG disabled ... Press any key \n");
getch();
printf("End\n");
}
```

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9.3.6 Example JAVA QLIB application

```
// ------------------------------------------------------------------------------
// This sample shows how to program the PCIWDOG3/4
// with Java Language. Install the QLIB Version 1.98o before running this
// sample.
// ------------------------------------------------------------------------------
import java.lang.*;
import java.awt.*;

 public class watchdog {
     public native   void            QAPIWatchdogEnable();
     public native   void            QAPIWatchdogDisable();
     public native   void            QAPIWatchdogRetrigger();
     public native   long            QAPIWatchdogStatus();

     static                watchdog   qlib;

     static  {
             System.loadLibrary("qlib32");     // win32: qlib32.dll
                                       // unix: qlib32.so
             }

     public static void main ( String [] args ) {

                           int i = 0;

             qlib = new watchdog();




             System.out.println("\nQUANCOM Java Watchdog Sample\n");
             System.out.println("Install QLIB 1.98o before running this");
             System.out.println("sample. For any questions ask");
             System.out.println("support@quancom.de via mail.");

             System.out.println("Activate watchdog ...\n");

             // QAPIWatchdogEnable: The function detects the
             // installed Watchdogtype and enables it.
             // This sample works therefore with the PCI, USB and
             // ISA Watchdog Boards.

             qlib.QAPIWatchdogEnable();

             while (i < 10)
                    {

                             System.out.println("Retrigger watchdog ...\n");

                             // Sleep 1s

                             try
                                 {
                                     Thread.currentThread().sleep(1000);
                                 }
                                         catch (InterruptedException e)
                                 {
                                         break;
                                 }

                                         qlib.QAPIWatchdogRetrigger();

                             i++;

                                 }

                    System.out.println("Disabling watchdog ...\n");
                    qlib.QAPIWatchdogDisable();

             }
     }
```

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10. QLIB Commands

Guarantee that the QLIB (QUANCOM LIBRARY) is installed.

You please the" QLIB" documentation merges, takes further information about the installation and like one the appropriate files into application.

The following chapter describes special instructions, to be needed around the map with the QLIB to use to be able.

10.1 General functions

10.1.1 Watchdog functions

QAPIWatchdogEnable

void **QAPIWatchdogEnable** (void);

The **QAPIWatchdogEnable** function enables the watchdog board

QAPIWatchdogDisable

void **QAPIWatchdogDisable** (void);

The **QAPIWatchdogDisable** function disables the watchdog board

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QAPIWatchdogRetrigger

void **QAPIWatchdogRetrigger** (void);

With the function **QAPIWatchdogRetrigger** it is possible to retigger an active watchdog card

10.1.2 Administration and other functions

QAPINumOfCards

ULONG **QAPINumOfCards** (void);

With the function **QAPINumOfCards** it is possible to ask , which used cards are supported by the QLIB

QAPIGetCardInfo

LPCARDDATAS **QAPIGetCardInfo** (ULONG **cardid**);

With the function **QAPIGetCardInfo** it is possible to get some information about the card

QAPIGetCardInfoEx

ULONG **QAPIGetCardInfoEx**(ULONG **cardid** LPCARDDATAS **lpcd**);

With the function **QAPIGetCardInfoEx** it is possible to get some information about the card. These will be written into the applications memory

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QAPISpecial

ULONG **QAPISpecial** (ULONG **cardid** ULONG **jobcode** ULONG **para1** ULONG **para2**);

With this function **QAPISpecial** it is possible to run card specific functions

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10.2 Extended QLIB Commands(QAPIExt...)

10.2.1 Watchdog-Functions

QAPIExtWatchdog

void **QAPIExtWatchdog** (ULONG **cardhandle** ULONG **jobcode**);

With the function **QAPIExtWatchdog** it is possible to respond the Watchdog card

10.2.2 Administration functions

QAPIExtOpenCard

ULONG **QAPIExtOpenCard** (ULONG **cardid**, ULONG **devnum**);

Use the function **QAPIExtOpenCard** to open a board and retrieve the board handle

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QAPIExtCloseCard

void **QAPIExtCloseCard**(ULONG **cardhandle**);

With the function **QAPIExtCloseCard** the board is closed

QAPIExtNumOfCards

ULONG **QAPIExtNumOfCards** (void);

With the function **QAPIExtNumOfCards** it is possible to ask , which used cards are supported by the QLIB

10.2.3 Other funtions

QAPIExtSpecial

ULONG **QAPIExtSpecial** (ULONG **cardhandle** ULONG **jobcode** ULONG **para1** ULONG para2);

With this function **QAPIExtSpecial** it is possible to run card specific functions

QAPIExtGetCardInfo

LPCARDDATAS **QAPIExtGetCardInfo**(ULONG **cardid**);

With the function **QAPIExtGetCardInfo** it is possible to get some information about the card

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QAPIExtGetCardInfoEx

ULONG **QAPIExtGetCardInfoEx**(ULONG **cardid** LPCARDDATAS **lpcd**);

With the function **QAPIExtGetCardInfoEx** it is possible to get some information about the card. These will be written into the applications memory

QAPIExtReleaseCardInfo

void **QAPIExtReleaseCardInfo**(LPCARDDATAS **carddatas**);

With the function **QAPIExtReleaseCardInfo** it is possible with QAPIExtGetCardInfo to get out the asked card information

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11. Anhang

11.1 Frequently asked questions

11.1.1 General informations

Do I know problems gotten if I network cards, sound cards or other extension cards in my PC have?

Yes, it is dependent on it on which I/O addresses the QUANCOM card and the others lies. Resource conflicts can occur, if several devices use the same I/O address. Either you change the address of the QUANCOM card (chapter manual for high-speed configuration hard and software) or the address of the other component.

Which purpose does the program PCIInfo serve?

The program PCIINFO indicates the I/O addresses of all PCI cards, which are in the computer.

For what do I need the program PCISETIO?

The program permits you a manual setting of the I/O address of a QUANCOM PCI card.

For what do I need the program PCIGETIO?

The program PCIGETIO picks the basis out I/O address of the QUANCOM PCI card from the configuration memory of the PCI decoder.

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11.1.2 Problems with the Card under Windows 98/95 and Windows 2000/NT

Warum ist in der Systemsteuerung der Karten Dialog QLIB leer?

- Es ist keine QUANCOM PCI Karte im System.

Nach der Installation kommt die Meldung ”QLIBNDRV.SYS nicht gefunden ” oder ”QLIBNDRV.VXD nicht gefunden”- Was kann ich machen?

- Überprüfen Sie, dass die QLIB korrekt installiert ist. Für weitere Informationen rund um die Installation der QLIB sehen Sie im QLIB-Handbuch nach, das auf der CD enthalten ist.

Nach der Installation kommt die Meldung ”Direct-IO interface cannot be initialized qmulti32.dll **could not be initialized” - Was kann ich machen?**

- Überprüfen Sie, ob die QLIB korrekt installiert ist. Für weitere Informationen rund um die Installation der QLIB sehen Sie im QLIB-Handbuch nach, das auf der CD enthalten ist.

Warum gibt QAPIExtOpenCard (...) den Wert 0 zurück, obwohl die Karte installiert ist?

- Überprüfen Sie, ob die QLIB korrekt installiert ist. Für weitere Informationen rund um die Installation der QLIB sehen Sie im QLIB-Handbuch nach, das auf der CD enthalten ist.
- Die Karte ist nicht richtig konfiguriert. (”Systemsteuerung” => QLIB, Kapitel ” QLIB” Handbuch auf der Installations CD)

Warum bekomme ich die Meldung "Driver QLIBNDRV.SYS oder ”Driver QLIBNDRV.VXD konnte nicht geladen werden?”

- Überprüfen Sie, ob die QLIB korrekt installiert ist. Für weitere Informationen rund um die Installation der QLIB sehen Sie im QLIB-Handbuch nach, welches auf der CD enthalten ist.
- Die Treiber für die QUANCOM-Karte ist nicht geladen. (Systemsteuerung => System)

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Windows 2000/NT: Kann die QLIB nur mit Administratorenrechten installiert werden?

- Ja, installieren Sie die QLIB nur mit Administratorenrechten.

Windows 2000/NT: Warum bekomme ich die Meldung ”Treiber konnte nicht geladen werden” während der Installation?

- Die Installation wurde ohne Administratorenrechte ausgeführt.
- Die QLIB-Software ist auf einem Netzlaufwerk installiert worden. Installieren Sie die QLIB immer auf der lokalen Festplatte.

Windows 2000/NT: Wie kann ich den QLIBNDRV.SYS Treiber manuell installieren?

Wenn die QLIB-Installation fehlschlägt, kann es nötig sein, dass Sie den Treiber manuell installieren.

- Suchen Sie auf der CD in dem Verzeichnis ”Tools” die Datei **instdrv.exe.** Mit diesem Tool können Sie den Treiber manuell installieren.
- Führen Sie das Programm folgendermaßen aus:

instdrv qlibndrv d:\directory\qlibndrv.sys

Wechseln Sie dazu in das Verzeichnis, in der sich die Datei ”qlibndrv.sys” befindet.

- Wechseln Sie unter Systemsteuerung -> Dienste die Startart auf ” Automatisch” (für den Dienst QLIBNDRV). Starten Sie jetzt Ihren Computer neu.

Warum muß ich den Treiber nach jedem Neustart wieder starten?

Die Startart des Treibers steht auf ”Manuell”. Wenn Sie die Einstellungen ändern möchten, wählen Sie die Startart ”Automatisch” und starten Sie Ihr System neu.

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11.2 Customer Communication and Help

Do you need help?

If you don't know how to go on during the installation or operation of your QUANCOM board please read this user's guide first.

! Tip !

You can find an ASCII–Text–file "README.TXT", which includes changes made after printing this user's manual on the QUANCOM installation CD

! IMPORTANT !

If you have further questions please contact our support team and have the following information handy:

- Exact type of board
- Operating system, hardware equipment and Bus-System
- Name and version of the program, where the error is reported.
- A detailed failure description. Please try to reproduce the failure, describe it as exact as possible, and which steps led to this failure.

Contact:

The QUANCOM internet website
WWW.QUANCOM.DE

Per Fax
+49 22 36 / 89 92 - 49

Per e-mail:

© QUANCOM Informationssysteme GmbH

support@quancom.de

Address:
QUANCOM INFORMATIONSSYSTEME GmbH
In der Flecht 14
D-50389 Wesseling
Germany

If you need urgent help call:

QUANCOM Hotline Germany
+49 22 36 / 89 92 - 20

Monday-Thursday
from 9:00 to 18:00
Friday
from 9:00 to 17:00

Actual drivers

You can find the latest Version of QUANCOM software on our internet website **http://www.quancom.de**.
You can also find a lot of information and “ Frequently asked questions (FAQ’s)”there. Before you contact the QUANCOM support, please check if you are using the newest software version of the QUANCOM software.

Repair

If you are not sure whether your QUANCOM board is defective please call the QUANCOM Hotline:

Tel.: **+49 22 36 / 89 92 – 20**

Before sending the QUANCOM board to us, call:

Tel.: **+49 22 36 / 89 92 – 20**

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If you sent your QUANCOM board to us, please use the original package or any other suitable package to protect the contents against transport damage. You also need to send us a copy of the original bill and the RMA number.

You can shorten the repair time by sending us an exact failure description, so that a faster failure search is possible. Send your QUANCOM board directly to the service department of QUANCOM Informations-systeme GmbH.

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11.3 Technical support form

If you have internet access please enter the following URL in your browser: **http://www.quancom.de/quancom/qshop.nsf/techniksupport?OpenForm&eng**. Else photocopy this form and use the copy of this form as a reference for your current configuration. Complete this form before contacting QUANCOM Informationssysteme GmbH for technical support and our applications engineers may answer your questions more efficiently. If you are using any other QUANCOM hardware or software products please add them to this configuration form. Include additional pages if necessary.

Name: _____

Company: _____

Address: _____

Phone: _____

Fax: _____

Computer Brand / Processor: _____

Operating system: _____

Display adapter: _____

Mouse: _____

QUANCOM Board _____

Other adapter installed: _____

Hard disk (capacity, free): _____

The Problem is: _____

List any error messages: _____

_____

_____

11.4 Documentation Comment Form

QUANCOM Informationssysteme GmbH would like you to comment on the documentation supplied with our products. This information helps us to provide you with quality products to meet your needs. Please include additional pages if necessary.

Titel: PCIWDOG3/4

Erstellungsdatum: 15.04.2009

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Please comment on the completeness, clarity, and organisation of the manual. If you find errors in the manual, please record the page numbers and describe the errors.
Thank you for your help.

Name: _____

Company: _____

Address: _____

Phone: _____

Fax: _____

Comment: _____

_____

_____

_____

_____

Mail to: **support@quancom.de**

Fax to: **+49 2236 89 92 49**

Address: **QUANCOM Informationssysteme GmbH**
In der Flecht 14,
50389 Wesseling
Germany

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11.5 Hardware and Software configuration form

This form helps you to list your hardware and software settings. Complete this form each time you change your software or hardware configuration, and use this form as a reference for your current configuration. Complete this form accurately before contacting QUANCOM Informationssysteme GmbH for technical support, so that our application engineers can answer your questions more efficiently.

- **QUANCOM Product:**

Name / Name of Board _____

Interrupt Level _____

DMA Channel _____

Basis I/O Address _____

Operating system _____

- **Andere Informationen**

Computer brand and Model _____

Processor _____

Clock Frequency _____

Type of Video Board Installed _____

DOS Version _____

Programming Language _____

Programming Language Version _____

- **Andere Karten im System**

Basis I/O Address of other Boards _____

DMA Channels of other Boards _____

Interrupt Level of other Boards _____

11.6 Trademark

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